

103

MAGNUSON ACT AND SEAFOOD SAFETY

HEARING

Y 4.M 53:103-51

BEFORE THE
SUBCOMMITTEE ON FISHERIES MANAGEMENT

OF THE

COMMITTEE ON MERCHANT MARINE AND FISHERIES HOUSE OF REPRESENTATIVES

ONE HUNDRED THIRD CONGRESS

FIRST SESSION

ON

H.R. 780

**A BILL TO REAUTHORIZE THE MAGNUSON FISHERY
AND CONSERVATION ACT**

AND ON

**MANDATORY SEAFOOD INSPECTION TO PROTECT THE
CONSUMER**

SEPTEMBER 10, 1993, BROOKLYN, NEW YORK

Serial No. 103-51

Printed for the use of the Committee on Merchant Marine and Fisheries



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MAGNUSON ACT AND SEAFOOD SAFETY

FRIDAY, SEPTEMBER 10, 1993

**HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON FISHERIES MANAGEMENT,
COMMITTEE ON MERCHANT MARINE AND FISHERIES,
Brooklyn, NY**

The Subcommittee met, pursuant to notice, at 10:00 a.m., in the Marine and Academic Center, Kingsborough Community College, 2001 Oriental Boulevard, Brooklyn, New York, Hon. Thomas J. Manton [chairman of the Subcommittee] presiding.

Members present: Representatives Manton and King.

Staff present:

Mr. MANTON. Good morning, everybody.

I am Tom Manton, Chairman of the Fisheries Management Subcommittee. I'm joined by my colleague from Long Island and from the other side of the aisle, Peter King.

OPENING STATEMENT OF HON. THOMAS J. MANTON, A U.S. REPRESENTATIVE FROM NEW YORK, AND CHAIRMAN, SUBCOMMITTEE ON FISHERIES MANAGEMENT

Mr. MANTON. Today, we continue to investigate seafood safety and fish conservation practices.

My colleagues on the Committee sometimes rib me over the scarcity of fishermen in my District, but my response is that while some Congressmen represent large numbers of recreational fishermen and others represent many commercial fishermen, I represent a city that consumes more seafood, per capita, than any other city in our nation. Thus, I'm committed to insuring consumers a safe, economical, and stable supply of seafood products.

Our goal of protecting seafood consumers matches the needs of the fishing industry, since any governmental or private action that threatens safety, reduces fish stocks, or increases the costs of seafood, harms the industry by undercutting consumer demand for the harvest of the sea.

We're here today to learn the best way to accomplish this shared goal. Our witnesses are a cross-section of experts with hands-on experience in every aspect of the industry—from harvesting to the sale and preparation of fish products.

We'll also hear from recreational fishermen who are particularly concerned about fishery conservation efforts.

Unfortunately, we could not accommodate all of those who wanted to testify. However, I assure those who could not testify today that we are eager to hear their views, and we'll be working with you on these important issues.

Those on the Councils and at NMFS have a difficult task. If management plans unreasonably restrict commercial or recreational catch, then everyone suffers. The sportsman, the fisherman, the processor, and the retailer must unnecessarily reduce their activities and the consumer is faced with higher prices.

If, however, the management plan permits overfishing, then the resource is depleted and harms those same persons and also future generations.

This hearing will help us to develop a legislative approach that will conserve this valuable resource for future generations, while providing current consumers and commercial and recreational fishermen with a stable supply of seafood.

In terms of consumer protection, some witnesses will testify that safety problems associated with the harvesting and marketing of seafood must be addressed by legislation. Others believe the industry has heard these complaints and is acting to eliminate any safety hazards that may continue to exist.

While we are impressed by the forceful and costly actions taken to improve seafood quality and safety, there may still be seafood products in the marketplace that do not meet the high standards favored by the industry and consumer advocates alike. The goal of the hearing is to learn what the Government needs to do to insure all seafood products are safe and wholesome.

I thank our witnesses in advance for sharing their expertise with the Subcommittee. Your participation in this hearing will help us do what is right for the resource and for our citizens.

Mr. MANTON. I turn now to my good friend and colleague from Long Island, New York. I think he's probably closer to where we are this morning than I am, even though I came from Queens. I'm way up by the Triborough Bridge, so I think it was twenty-six miles to get here.

In any event, Peter is a member of the full Committee on Merchant Marine and Fisheries, and he was kind enough to be with me here today so we could get this hearing underway. I very much appreciate his willingness to take time out of his busy schedule to join us today, and I'd ask him if he has an opening statement.

Mr. KING. Thank you, very much, Tom.

In answer to your question, it took me about a half-hour to get here today, so that says something about one of us. I don't know which. But, anyway,—

Mr. MANTON. You were on time.

Mr. KING.—I'm glad to be here.

STATEMENT OF HON. PETER T. KING, A U.S. REPRESENTATIVE FROM NEW YORK

Mr. KING. I want to commend Chairman Manton for convening this hearing and for giving me the opportunity to be here. I have no particularly profound opening statement, other than to say that I look forward to the testimony to determine the appropriate balance that should be struck between the environment, health policy, and economic realities. I think it's a very important hearing, very important topic, and I look forward to the testimony.

Thank you, Tom.

Mr. MANTON. Thank you, Peter.

Before we begin the formal testimony, I'd be remiss if I did not take the time to thank Dean Milton Drucker. Mike Drucker, where are you? There he is. An old friend.

Also, Professor Tony DiLernia, and Mr. Ralph Edwards, for arranging the use of the Marine and Academic Center for today's hearing.

Mike Drucker and I, I guess we've known each other—it's well over twenty years, and I know he's been a driving force here in the success of the Kingsborough Department of Marine Education. And Tony DiLernia has done a yeoman's job in educating me and my staff about fisheries issues since I became Chairman of the Subcommittee.

I can tell you that we are very receptive to your ideas. I, for one, do not claim to be an expert in these matters. You are the experts, and we are here to hear from you and to learn from you. We very much appreciate the help we've gotten in arranging for this beautiful setting and for the resources of this institution.

The first witness, Doctor Vaughn Anthony. Already at the table. Chief of the Northeast Fisheries Center's Division of Conservation and Utilization.

Doctor Anthony will provide the Subcommittee with an overview of the fisheries resources of the mid-Atlantic.

Doctor Anthony, you have the floor.

STATEMENT OF DR. VAUGHN C. ANTHONY, CHIEF OF THE CONSERVATION AND UTILIZATION DIVISION OF THE NATIONAL MARINE FISHERIES SERVICE'S REGIONAL SCIENCE CENTER IN WOODS HOLE, MASSACHUSETTS

Dr. ANTHONY. Thank you, very much.

What I'll try to do in the limited time I have today is give you a quick overview of the status of groundfish in New England, in the Gulf of Maine on Georges Bank, and in the mid-Atlantic area, and touch base on a few of the important species—cod, haddock, yellow-tail flounder, summer flounder—and talk a little bit about some of the underutilized species, which are of particular relevance to what's going on in the mid-Atlantic area.

I have other transparencies I can go into on other species, if you have any particular questions, to give you a flavor of what the situation is vis-a-vis the Magnuson Fishery Conservation and Management Act (Magnuson Act) and what the New England and Mid-Atlantic Councils are doing in terms of management.

The interesting problem these days is the groundfish situation in New England in the Gulf of Maine and on Georges Bank. This figure simply shows you the landings of principal groundfish off the Northeast United States, which covers the mid-Atlantic area, and includes thirteen major species. You see the landings are from 1960 to 1992. The red shows the landings for the United States' fishermen. The purple shows you the landings of all countries.

You notice the big bulge in landings in the mid-60's. This is when we had thirteen countries fishing off our shores, catching a great variety of species, overfishing many of the species—groundfish included—in this area. They caught 155,000 tons of haddock in

1965. They caught over 300,000 tons of silver hake in 1965. They caught 500,000 tons of three species of fish, and today we catch about 20,000 tons, in comparison.

The stocks declined very rapidly. Landings went down. The International Commission for Northwest Atlantic Fisheries (ICNAF) put catch quotas into effect starting about 1973. These were the first total quotas for groundfish that were broken up into national allocations, the first national allocations of quotas of groundfish in the world, on about twenty-three species.

In the next year, in 1974, we had fifty-four stocks under some kind of catch quota control. Then we had what we call a second tier management program (at this point 1974-1975), which addressed the bycatch problems and species interaction problems. This is twenty years ago. We, under ICNAF, have tried to address some of those situations that people are talking about so much today.

Doing that, the catch declined greatly, and the United States catch, at the same time, increased.

ICNAF died about this time, and the Magnuson Act began. We had a couple of good year classes of cod and haddock at this point, and this is why the scientists and New England Fisheries Management Council came to odds on haddock. You may be familiar with the fact that haddock was greatly overfished at this point. We had no good year classes until about 1975.

At this point here, we had a big debate about what to do about it. The New England Council decided that things were very healthy. The catch had improved. They didn't need to continue the catch quota management at that time, and they terminated direct control of fishing at about 1982, the catch quota control of groundfish—and the year class of haddock that we were trying to save, declined, and we haven't seen a good year class of haddock since.

We have seen a steady decline in catch in the United States in the last decade of overfishing in the 1980's, because there's unlimited harvesting, no catch quotas, and we're now down to about 90,000 metric ton catch, and the maximum sustainable yield (MSY) for this complex of fish is about 400,000 metric ton. So, we're catching about one-quarter of what we could catch if we rebuilt the stocks.

All right, that's the Atlantic catch situation, real quickly.

The effort situation for the United States fishermen, began in 1976, at the beginning of the Magnuson period. You can see that, when the Magnuson Act came in, fishing effort increased very rapidly over time, to about 1985, declined slightly as the landings and stocks were overfished, and then went back up as we had a couple of good year classes of cod and yellowtail flounder. And so, now, the effort here is about as much as it used to be in 1985 in terms of thousands of days fished, which is only about half the problem.

During this decade, we've seen a tremendous increase in technology, as well as in the size of vessels. And, when you look at the fishing power of the fleet over the last ten years, you can probably say that the pressure by the fleet has more than doubled, perhaps it has gone up by a factor of three.

So, fishing pressure has increased tremendously over this period of time. Landings went up, initially, when the fishing effort went up. Overfishing began to be serious in about the early 1980's, and

landings declined steadily during the 1980's, and as I say, went up again as we had a couple of good year classes of fish, and now it's declining.

In terms of abundance over that period of time, we have two indices of abundance that we have followed at the Northeast Fisheries Service Center in Woods Hole. One is the catch per unit of effort from the otter trawl fleet. The other is our research vessel survey that we do twice a year. We've been doing these since 1963. They show pretty much the same things.

There's no question as to what the status is of the abundance of these resources over this period of time. Under heavy fishing by foreign nationals, stocks declined. They improved under some quota management in ICNAF. The Magnuson Act started about this time and this is the history of management under MFCMA, since 1977. The abundance has dropped. It went up for one or two years, from two good year classes, and now we're down at record low levels for both indices of abundance, and we're declining even further. The catch of cod this year is declining an additional thirty per cent. It declined last year by about twenty per cent.

During this period of time, much of the stocks were removed. As much as fifty per cent of the biomass of the stocks were caught annually. Fishing mortality increased dramatically, and I'll show you in a minute, on a species-by-species basis, simply how low things have gone under uncontrolled heavy fishing pressure.

There are three major species that people are interested in, in the New England area—cod, haddock, and yellowtail flounder—and we use these as indices of abundance and well-being for the total groundfish complex. The New England Council, as a matter of fact, in their multi-species plan covering thirteen species, is gauging its changes in fishing effort and mortality based on essentially these three species.

So, I'll go through these real quickly. Georges Bank cod, the height of the little bars here indicates the quantity of age two fish added to the stock each year—what we call recruits. And you can see, in 1973, at this point, the fish born in 1971 entered the fishery; a very good year class in 1971, another one in 1975, one in 1979. Here's one in 1987 and the last one was 1988. You can see a general decline in what we call recruitment coming into the stock over time.

This is the overfishing by foreign nationals and the United States, early on. This is a period of very good abundance, in the late 1970's and early 1980's, under catch quota control. This is a period of very strong declines in abundance during the 1980's, and now we're down at this period here, 1991, 1992, where we have practically a disaster. There are no young fish coming into the stock at all. The population of cod is even declining still further than it is already.

Next year, I don't know what we're going to say about cod. We're going to re-do the assessment this coming year, but we're practically at rock bottom on cod, and cod is one of the last species to suffer the fates of overfishing, because of their habits, where they can crowd into rock piles. They're not a schooling type of fish, out on the flat bottom like haddock. They're a little harder to catch, and

when cod decline drastically from overfishing, it's a good indication that everything else is pretty well overfished, as well.

So, that's the situation on the abundance of cod.

When you look at the spawning biomass and fishing mortality rates for cod, you can see why the stock is the way it is.

What I have here is what's called the exploitation rate on this axis, and that's just assessment stock jargon for the percent of the population removed by fishing. So, when you see 0.5 here, it means that fifty per cent of the stock has been removed by fishing. So, early on, in 1978, the overfishing level here is about .28. At that time, in 1978, the fishing fleet was overfishing the stock, and the exploitation rate had gone up fairly steadily. In 19s91, the fishing fleet was removing over sixty per cent of the biomass every year.

So, every single year, they're removing over half of the fish that were available to be caught, a very high mortality rate, twice as high as what it should be. It should be down here, for the overfishing level, and it's up at this point.

What happened, of course, is the spawning stock biomass declined greatly. The stock here should be about up at this level, slightly over a hundred. We're down below forty, and we're declining very rapidly. And, as the spawning stock goes down, the recruitment, the progeny produced by the spawning stock also goes down and it's called recruitment overfishing. It's a downward spiral, and the only way to get out of that downward spiral is to rebuild the spawning stock and wait a series of years for recruitment to gradually build up. And the lower the spawning stock goes, the longer it takes, and when we're getting stocks at this low a level, we may be talking about a twenty-year process of rebuilding.

In a minute, I'll go through summer flounder, and show you where that's been caught in time and, if you catch the stock in time, where you've got a couple of year classes to work with, you can rebuild the stock very quickly.

This figure is redfish and Georges Bank haddock landings over time, just to give you a flavor to what's happened to these species. In the 1940's and 1950's, we caught 40,000 tons of redfish. We caught haddock, here, at the maximum sustainable yield level of 47,000 tons.

For about three decades, this haddock resource was providing its maximum amount of resource to us. It was overfished in the period of two years by the Soviet Union, Canada, and the United States. It crashed in 1966 and we had very few year classes coming in until about the mid-1970's.

We had one year class in 1975, and it occurred when the fishing pressure on that species was extremely low, the lowest we've ever seen. They were only removing about ten per cent of the population per year. That year class was able to live to age three, spawn, and it produced a year class, as well, the 1978 year class.

This was a year class we tried hard to put into the Bank to rebuild this stock so it would come up to this level, again. The attitude at that time was: if you stopped fishing for haddock, you'd put everybody out of business; they had to keep fishing for haddock because that's all there was there to catch; and, there was plenty of fish.

People didn't believe the assessments and that year class lasted about two years, and we haven't seen a year class of haddock to speak of since 1980, and that's well over a decade ago. It's at very low levels.

If you look at redfish landings, we're less than a thousand metric tons here, now. We used to catch forty, as much as sixty thousand. We're down. This past year, we caught 800 tons.

Haddock, we're catching two thousand tons. We used to catch forty-seven. So we used to catch as much as 77,000 tons together. Now, we're catching about two, a year.

Yellowtail flounder, this is another sad story. At one time, the MSY for this stock (southern New England yellowtail flounder), was about 23,000 metric tons. During this period of time, in the 1960's and 1970's, the abundance was high. We had a lot of age two recruits coming in. We were catching around, on average, about 28,000 metric tons.

The stock declined rapidly during the early 1970's, under foreign fishing pressure. It came up in the early 1980's, and we had two, as you can see, two groups of recruits coming into this stock. We had another good opportunity to rebuild the population. We didn't take it.

This is the time that the Council said we don't need quotas. There's no problem, we don't need to control overfishing, there's no particular problem with that. And, we went through a period where we had no recruitment at all. In 1989, we had one year class come in, the 1987 year class. Sixty per cent of this was discarded, due to a minimum size on the stock which was too high, and since that time, this is what we're getting for recruitment to that stock. Believe me, there is an estimate here. There are some fish numbers there, but the stock is very low.

This is what I call a "basket case," along with the haddock, and the latest information is that the yellowtail flounder stock in Southern New England is just about gone now, along with the haddock resource, and we're very pessimistic about it returning in the near future.

So, those are three major species in the New England and mid-Atlantic area. If you take a look at the collection of stocks—cod for the Gulf of Maine, cod for the Georges Bank, haddock for the Gulf of Maine, and haddock for Georges Bank, pollock, redfish, the two yellowtail flounder stocks and the others—you see that the spawning stock biomass that you need in order to catch the maximum amount of fish in this area is almost a million metric tons.

In 1993, we had a spawning stock of 380,000 tons, much of which is in the other categories and in pollock. We need to increase the spawning stock by a factor of two-and-a-half or two-and-three-quarters times—almost three times—to get back to where we should be.

And, if you look at the key species, like cod, for example, we need thirty thousand metric tons for a spawning stock in the Gulf of Maine. We have ten, which is one-third of it. For Georges Bank cod, we have thirty-five, instead of a hundred and five. For haddock, on Georges Bank, we have fifteen. It needs to be increased by a factor of about nine times. Haddock in the Gulf of Maine needs to be increased by a factor of seven. Redfish has to increase by a factor of four.

When you put it all together, you're talking about increasing spawning stock by about three times, overall, and the most important species have to be increased by factors of four, five, six times. This is a tremendous low level of spawning stock.

If the stock is rebuilt, you can catch this maximum sustainable yield, which is this figure, here, and you look at what we could catch and what we are catching, in these two columns, and you see the problem that we're in right now.

With respect to Georges Bank haddock, we're catching 6,000 tons. 4,000 of that is caught by Canada. We're catching 2,000. And we should be catching 47,000.

Look at redfish. We catch 800 tons. And we should be catching 14,000.

Yellowtail flounder, we're catching 3,000. We should catch 16,000. Yellowtail in Southern New England, we are catching 1500. We could catch 23,000.

So, we should be catching about 400,000 metric tons. We're catching 140,000 metric tons and Canada is catching about thirty-five per cent of that. We're catching about 90,000 metric tons, and we should be taking four times that amount of fish, if we could rebuild the stock.

So, that's the situation on those groundfish.

Now, exploitation rates, which again is simply the percent that the fisheries is removing from the population annually. You can see from this figure for Georges Bank cod, the latest estimate is that we're removing about a little over half of the stock every year. For the Gulf of Maine, we're removing 63 percent of it every year, in the last two years. For yellowtail flounder, it's 51 per cent, and 74 percent. On the average it's about 56 percent. So, we're removing about half the resource annually.

The Council target for these stocks is about thirty-three per cent, and that's the overfishing target. In order to maintain the resource at its level, the fishing mortality rate should not exceed thirty-three per cent. That means that we shouldn't remove more than a third of the resource every year, from the groundfish.

And, in order to manage that resource, you need a number less than that. So, a number less than thirty-three might be a quarter, somewhere in that magnitude. So, to manage, to rebuild to an MSY level, you're talking about exploiting the stock by removing about twenty-five per cent of the resource annually, instead of, say, thirty-three. In fact, we're removing over fifty per cent of it right now.

So, that gives you an idea of the amount of overfishing that's occurring on this stock. The fishing mortality is about twice as high as it ought to be and the stocks are certainly less than half as great as they ought to be.

So, Amendment 5 on the New England groundfish, right now, is designed to reduce the fishing mortality by 50 percent, and they're going to do it over about a seven year period. And in that period of time, they'll get the fishing mortality rate down to a level where, hopefully, they're only removing about a third of the resource.

But, that's not a rebuilding program. That's only a program of reducing fishing mortality, to get it down to where it should be. After seven years of overfishing, if they're down to that level, then

they will (the plan is to) address what level they ought to be at to harvest at an optimum level.

So, you can see we're talking about a ten-year problem, if the stock holds up that long, for groundfish in New England—Southern New England and Georges Bank and the mid-Atlantic.

This is the summer flounder situation, however, in the mid-Atlantic area. The mid-Atlantic Council reduced the fishing mortality rate by a half, on this stock, in one year. Where the New England Council is trying to do it for groundfish over about a seven-year period, the mid-Atlantic did it in one year and, as a result, what we're seeing here, and this is 1994 (you see 1994 on the right-hand side), and 1993, we're seeing a predicted increase of the spawning stock biomass to fairly significant levels, simply by applying a catch quota in 1993, based on reducing the exploitation rate from about sixty per cent or so, down to about, oh, forty-five per cent or so, something like that.

The fishing mortality rate here is 1.1. In one year, they reduced it to .53. They're talking about, in 1994, reducing it down to .4, which would be removing about thirty per cent of the stock a year, and if they do that, the biomass will increase very dramatically, almost overnight, and the reason this is possible is because they had a couple of year classes at this point to work with.

If you look at the index of recruitment in the next figure, which is this line here, the average recruitment is at this point. So, all the recruiting year classes are very low. But, they had one here that they could work with. These are low, but they're not disasters. They had some recruitment to work with and so, in one year, by putting a catch quota on and controlling the resource, they are doing an excellent job of rebuilding this resource and we're very optimistic that summer flounder resource in a year will be very healthy and shortly be back to where it is even better than it has been in the last ten years or so.

Now, so that's what we think is a very good success story. There are other "success stories" that I want to talk to you about in this part of the world. There are some species that are underfished—mackerel for example. This figure shows you the abundance of mackerel, on the red line, and these are the landings, down here in purple.

Landings in the early years were all taken by foreign nationals. The United States has never caught very much mackerel. When the Magnuson Act came in 1977, foreign nationals generally stopped fishing on mackerel. The resource remained at low levels for about seven or eight years, and then it's shot upwards since.

There are two groups of mackerel—what we call a southern contingent of mackerel, and a northern contingent. The northern contingent spawns in the Bay of Charles, in the Gulf of St. Lawrence, around July. Canada is doing an assessment on that group, and they're coming up with an estimate of at least a million metric tons or more, for the northern contingent. And we think that, when you put the two contingents together, both of which overwinter in this part of the world, from roughly Georges Bank to below Cape Hatteras, off the Shelf, we're talking about three million metric tons of mackerel, a tremendous resource which we're greatly underfishing.

Other species that we're underfishing, of course, are the skates and spiny dogfish. Since the overfishing on Georges Bank has occurred during the decade of the 1980's, these species of skates—there are seven in all—that are commercially useful (three major species), and spiny dogfish. These populations have generally exploded. They're amounting to three-quarters of the biomass on Georges Bank now, where the cod and haddock and flounders used to make up about three-quarters of the resource in former years.

But the abundance levels (indices of abundance), have shot right up for these species. They're beginning to taper off a little bit now. The landings for the skates and dogs went up in early years, in the early 1970's, it declined, I think, due to marketing in this area. Now, it's climbed up quite a bit. The catch now is only about twenty-five thousand metric tons. It could be almost ten times that much for the combined species, because the stocks are so healthy right now.

In the spiny dogfish figure, for example, if you look at our survey index, you can see that the index of abundance has gone just like this on spiny dogs. The landings have been fairly low. Only last year and this year are we really getting some reasonable landings of spiny dogfish.

So, as you look at the northeast fisheries resources underexploited stocks—we have mackerel, dogfish, skates, butterfish, loligo squid and illex squid. You look at the—you can see here, the landings in 1992 of these species. Here is the MSY, what we could be taking in normal times. Normally, we could catch 130 metric tons of mackerel. The stock is so large now, we feel we could catch 600,000 tons. We're only catching thirty-eight.

Dogfish: we're only catching eleven. Normally, we could catch sixty. Now, we figure we can catch two hundred.

Skates: we're catching twelve. We could double that, at the present time.

Butterfish: we're only catching three thousand metric tons. Again, a marketing problem. The stock is much better than its MSY value. We could catch twenty, now, we feel.

And squids, we've always underharvested them. These catches have increased. They've gone up, but we're still not at the level where we could be, which is harvesting another 66,000 metric tons.

Currently, we could harvest almost a million metric tons of these underexploited fish. We've taken a hundred—one-tenth of what we could take.

And so here is a good situation of underexploited stock. They need marketing support in order to allow the fishery to increase.

All right. That's all I want—I just wanted to give you a quick overview, of the downside and the upside. The groundfish situation is terrible and getting worse by the hour in the New England and mid-Atlantic area. I can talk on silver hake and some of the other species, if you want, but I just wanted to give you a flavor of what the situations are.

Some of the Pelagic resources, like herring and mackerel, are very healthy and there are many underutilized species here that are very healthy, but the problem is we don't have the markets. Those that are being fished are very much overfished. At the present time, in New England, there is unlimited control on the

catch of groundfish, except for mesh sizes, a few closed areas, and so forth. The New England Council is, hopefully, putting in Amendment 5, which will put in effort control, starting next year. And, we think within two years, there will be some constraint within that plan, so that the fishing mortality rate can gradually come down on groundfish.

The problem is (on groundfish), will the resource last long enough for management to do some good and rebuild the stock. For yellowtail flounder and haddock, it may be a twenty-year rebuilding program. It may be too late for those stocks, now. For cod, they're declining very rapidly, too. It's a question of how long those species are going to last.

Thank you, very much.

[The statement of Doctor Anthony can be found at the end of the hearing.]

Mr. MANTON. Thank you, Doctor Anthony, for the overview.

Just going back to the mackerel, spiny dogfish, skates, and other fish that are in abundance that we're taking a very small percentage of, what can we do about that?

I mean, is this a question of re-educating the American consumer, or——

Dr. ANTHONY. That's part of it, certainly.

Mr. MANTON. I assume these fish are nutritional? They have all the values that other, overfished, stocks have, but because of their maybe being bony or whatever, they're not that popular?

Dr. ANTHONY. Well, there are problems. With the mackerel situation, the mackerel are most plentiful here in the wintertime, when the fat content is not as high as it should be.

The mackerel stock in Europe now has rebuilt. The North Sea stock and their western stock have rebuilt. And, those fisheries are harvesting mackerel in the summer when their fat content is ideal. If we could harvest our mackerel a little sooner in the year, when they first migrate to the overwintering area here, we'd be better off.

Mr. MANTON. In other words, the fish will be tastier, more fat?

Dr. ANTHONY. That's right. And that's very important. Fish quality today is more important than ever before.

Up until the last year or so, there hasn't been markets for dogfish. There are more markets now coming on line. Dogfish have been overfished in the British Isles.

There's more potential dogfish than there has been. Other people here in the seafood industry can talk to you about that.

But the problem is, simply, markets. Butterfish is a good example.

We had a butterfish market in Japan a few years ago. We don't have that, now. We have a good abundance of butterfish. The large butterfish are mostly caught in the winter off shore, in deep water. You need certain types of gear to get the large butterfish. So, you need to make a big investment, so you better have a good market for that, and we don't have that.

Mr. MANTON. Why don't we have the market in Japan any more?

Dr. ANTHONY. They're finding their butterfish elsewhere, and they are cheaper.

So, it's a marketing problem, and the re-education of Americans is a very important point. In New England, for example, it's been a traditional groundfish fishery. You know, cod, haddock, and one flounder, and that's about it.

Now, they are eating monkfish. They are eating other species. Dogfish is a very good fish to eat. Herring has been the most prolific and best fish in the world, for centuries, but we eat very little of it here in the United States. Sardines is the only way we've really used herring. That's a resource that's terribly neglected in the United States, and that's simply because of our food habits.

We want scallops. We want lobsters. We want high-priced food like that, and a couple of the traditional groundfish.

So, education is a very important thing that needs to be done.

Mr. MANTON. Thank you, very much, Doctor Anthony.

We will start with the other panel, and may be back to you, Doctor, for some more questions.

Why don't we—shall we have the panel come forward? Let's see, the way we've got it lined up: Mr. Fote, Mr. Stolpe, Mr. O'Malley, and Professor DiLernia.

And, why don't we start with Professor DiLernia?

We usually have a five-minute rule, and Dr. Anthony took a lot longer, as expected, to give us the overview, and we'll see how that five-minute rule works with this panel. We don't want to really limit anybody, and I see most of you have prepared texts, so why don't we start off with the Professor, and we'll see how the time goes.

STATEMENT OF PROFESSOR ANTHONY DiLERNIA, PROFESSOR OF MARINE EDUCATION, KINGSBOROUGH COMMUNITY COLLEGE

Mr. DiLERNIA. Thank you, Mr. Chairman.

On behalf of President Leon Goldstein, President of Kingsborough Community College, Vice President Michael Zibron, and Dean Milton Drucker, I'd like to welcome yourself, the Subcommittee, and the witnesses to Kingsborough Community College today.

On a personal note, it's a, in a sense a personal highlight for me, a lifelong resident of Queens, graduate of Saint John's University, someone who has had a passion for fish and fisheries management his entire life, to be able to present testimony to you today, and your Committee. I consider it a personal honor.

Mr. Chairman, and members of the Committee: My name is Anthony DiLernia, and I am a Professor of Marine Education here at Kingsborough Community College. In addition, I am a member of the Mid-Atlantic Fishery Management Council, Executive Director of Long Island Commercial Passenger Fishing Vessel Association, President of the Freeport-Nassau Fishermen's Alliance, a member of the Executive Board of the New York Seafood Council, and for the past fifteen years, I have been employed part-time as a captain for the Blue Fin Fleet in Freeport, New York, taking members of the public on daily fishing trips into the EEZ.

These positions have enabled me the ability to view fisheries management from three different perspectives: as an academic, as a member of industry, and as a fisheries manager. And, in fact, I see my role as a Mid-Atlantic Council member primarily as one re-

sponsible for facilitating communication between the scientific and management communities and the recreational and commercial industries.

My comments today are my own, but have been endorsed by the members of the Freeport-Nassau Fishermen's Alliance.

First, I'd like to point out that man has a moral obligation to manage fisheries. We are taught this very early on. In fact, Chapter 1, Verse 26 of the Book of Genesis states, "Let us make man in our image, after our likeness, and let man have dominion over the fish of the sea and the fowl of the air." I wonder if that should become required reading for the next AA to remind him there have been a few people ahead of him, as far as fisheries are concerned.

As a result of this moral obligation, a social contract exists between government and the people to manage fisheries. In recent times, in a frenzied attempt to satisfy this social contract, we have reduced fisheries management to cold numbers and statistics and have neglected the human element. What we need is to include more social scientists in the fishery management process. We must consider the human element more closely when making management decisions.

Secondly, I'd like to recommend that a greater attempt be made to include our immigrant and minority populations in the recreational data collection process. I am not at all confident that their attitudes or values are properly represented in the present management process and the present data.

Third, I feel the Act should recognize that in some fisheries, the division between recreational fishing and subsistence fishing is not as clear as many would like. The Act should, therefore, require that fisheries containing a recreational component be carefully analyzed to determine which portion of the recreational fishery is, in fact, subsistence fishing.

Fourth, it is likely that as fishery management plans and amendments are developed, the operators of passenger fishing vessels will be issued operator's permits. The Act should recognize that these permits could carry revocable privileges which would benefit the public and allow the operators of passenger vessels the flexibility necessary to continue their operations.

Finally, I would like to recommend that Section 302 of the Act be amended to permit the inclusion of New York State in both the New England and Mid-Atlantic Fishery Management Councils.

Fishermen operating from the ports of Montauk, Shinnecock, Greenport, and the North Shore of Long Island operate in a mode identical to those fishermen from southern New England. The fishermen from these ports usually find themselves fishing alongside fishermen from Connecticut, Rhode Island, and Massachusetts. Georges Bank, which is east of Montauk and southeast of the traditional New England ports is a common ground for vessels from New York, as well as New England, States. Fishermen on the East End of Long Island often find themselves following the proceedings of the New England Fishery Management Council more closely than the Mid-Atlantic Fishery Management Council, because often the actions of the New England Council have a greater effect on the fishermen from the East End of Long Island.

Fishermen operating from the South Shore ports of Shinnecock, Fire Island, Freeport, Point Lookout, and Brooklyn usually fish in a fashion more closely aligned with the traditional Mid-Atlantic fishermen, the classic example being the mixed-trawl fishery, which is prosecuted in the Mid-Atlantic region.

It is clear that New York is a transition State between the New England and Mid-Atlantic regions, much like North Carolina is a transition State between the South Atlantic and Mid-Atlantic regions, and Florida a transition State between the South Atlantic and Gulf regions. Florida is presently represented on both the South Atlantic and Gulf Councils, and North Carolina is supported by many, including the Mid-Atlantic Council, in its desire to be represented in both the Mid-Atlantic and South Atlantic Councils.

It is, therefore, my opinion that the fishermen of New York would be best served if New York were allowed seats in both Councils.

Thank you for your time and attention, and I would be happy to answer any questions you may have.

[The statement of Mr. DiLernia can be found at the end of the hearing.]

Mr. MANTON. Thank you, Tony. We'll go through the panel, I think, and then we'll get back to some questions after that.

Mr. O'Malley?

**STATEMENT OF JAMES D. O'MALLEY, EXECUTIVE DIRECTOR,
EAST COAST FISHERIES FOUNDATION, INC.**

Mr. O'MALLEY. Thank you, Mr. Chairman. I don't know whether that's coming through, or not. I was wondering why everybody else got two microphones, and I only got one.

Thank you, Mr. Chairman, and welcome. The East Coast Fisheries Foundation thanks you for holding this hearing, in the midst of their greatest marketplace, as you point out in your introductory remarks.

I'd like to handle things the way that Tony did. You have my written comments, and I'll just, if I may, touch on a couple of things.

You've heard from an awful lot of people, including the National Fisheries Policy Conference of last year in Washington, that the Magnuson Act is fundamentally sound, and you'll hear that expression over and over again, and we agree.

There are enormous issues under debate right now—such as habitat, bycatch, ITQs, extraction of economic rent, conflict of interest, and the topography of opinion on those subjects is changing daily. And I would advise thorough discussion before decision, and as a result, would hope that those things not be addressed in this re-authorization in a precipitous manner. I think they need a great deal more discussion.

There are a few technical changes that I think we could see in Magnuson that might make the process work a little bit better.

I agree absolutely with Professor DiLernia that New York needs a seat on New England; with my colleagues in North Carolina, that they ought to be represented in the Mid, because of the natural barrier of Cape Hatteras; and, furthermore, for all of the same rea-

sons, I believe that there should be a seat on the Mid-Atlantic Council dedicated to the interests of Rhode Island and Connecticut.

There is, again, a kind of a natural break point, several of them, out there in the ocean, that don't recognize political boundaries—Nantucket Shoals, the Great South Channel, Hudson Canyon. They don't mean anything to anybody who's not out there, but they mean a great deal to the fishermen and they need a voice on the Council where those fisheries are being regulated.

One of the most important things to commercial fishermen's organizations is how they survive. And, one of the things that is key to their survival, I believe, is total elimination of the thirty-day statute of limitations for filing suit under a Magnuson Act Fishery Management Plan.

We have been cooperating and compromising, debating, and persuading for quite some time on the amendment to the summer flounder management plan. We've had more amendments go through. The problem, when you have to file suit, is it creates all of the problems that ongoing litigation put into place. Discussion and debate is replaced by stonewalling, Freedom of Information Acts, legal discovery processes, and quite frankly, it is very expensive to do this. But, if you don't like the provisions of a Management Plan, you have to file suit within thirty days. And, everything at that point becomes contentious.

I would like to see that provision eliminated altogether. I don't think it does anybody any good in the public process.

Another important thing that applies to commercial fishermen is I don't believe that any set of regulations devised by the Agency should be allowed to include a "no-action" reporting requirement in their data collection. Many of my members have given up fisheries permits rather than go through the trouble of filling out weekly or monthly filing reports on a fish that they haven't seen in seven or eight months, because they're out of season. But then, a year later, when they apply for a different permit, they're told that, "Well, you didn't fill out the report on that particular week when you didn't see that fish a year ago, so we're going to hold up this other permit as a result of that." I think it's pure harassment and serves absolutely no purpose whatsoever.

I believe that commercial permits should be required for the sale of any fish taken from the EEZ. I think there needs to be a basic recognition that financial reward is in conflict with and excludes a recreational intent. It's very easy to say, "Well, that's enough fun for today. Let's fire up the martini shaker and relax." I don't know of anybody who has ever said, "That's enough money for today. Let's relax."

I believe that the appointed members of the Council should be allowed to name alternates. The ex-officio members do, and I think we can trust the appointed members to have someone carry their message forth when they're unable to, for whatever reason.

The requirement for a unanimous vote to compel the Secretary to emergency action is a farce. The Agency representative always votes against it, and preserves the Secretary's option to do nothing, as a result. Either delete the provision entirely or make the Agency representative unable to vote on an emergency action.

This gets into a great deal more than Magnuson, but one of the things that my members would like to do is to voluntarily restrict their catches, and I have to caution them not to discuss that possibility with each other because they may be in violation of certain anti-trust laws.

A lot of fishermen realize that when they flood the market and drive the price down, the only answer is more volume and more volume and more volume. And if fishermen could make those agreements to catch only a certain amount of fish per week or per foot of vessel length or whatever it might be, that would smooth out the landings, smooth out the prices, and I don't think that it would harm the consumer.

Now, fishermen who are in cooperatives can do that under the Agricultural Cooperative laws. They cover fishermen's cooperatives, as well. But fishermen who are not in agricultural cooperatives should be able to get into those discussions and take those actions as well.

In the matter of seafood safety, I'd just like to say that generally I would defer to the expertise of the National Fisheries Institute, but by and large, everybody that I know in the industry is in favor of some kind of mandatory inspection program to protect the industry from the unkind assaults that always point to—right or wrong—the lack of a mandatory inspection program as an extremely dangerous and threatening thing to public health and safety.

So, once again, as far as I'm concerned, the Act is sound. The big issues, we need to discuss at length, and I think an awful lot of the problems that we have had in fisheries and in government have to do with the Agency leadership, and I know that that's not appropriate to this hearing. But when I hear about the haddock stock or the yellowtail stock, I can't help wanting to say, very, very loudly, that the industry has gone to the Councils and the Councils to the Agency, for years, asking for an increase in mesh size, and the Agency says, "We're sorry. That doesn't fit the 602 guidelines. You cannot have an increase in the mesh size, because we need an absolutely, total, complete plan that has all the answers to all the questions."

When I hear about the yellowtail stock, I think of the Spring and Summer of 1990, when the industry came to the Council and the Council to the Agency—and this is a matter of record—and said, "We have an enormous body of juvenile fish out there is an area which is presently closed. Please keep it closed." The Agency refused.

They discounted the very best empirical data and it's an irony that any professor in the world can put personal communication at the end of a sentence in a research document and somehow that's acceptable. When the industry does that, it's dismissed as anecdotal information. I don't understand the inconsistency there.

We have a lot of things to say that we think would be good for the resource and the Nation and the industry, and we hope that under new leadership for the Agency, we'll be listened to quite a bit more.

Thank you.

[The statement of Mr. O'Malley can be found at the end of the hearing.]

Mr. MANTON. Thank you, Mr. O'Malley.
The next witness will be Mr. Nils Stolpe.

STATEMENT OF NILS STOLPE, EXECUTIVE DIRECTOR, NEW JERSEY COMMERCIAL FISHERIES ASSOCIATION, ON BEHALF OF LUND'S FISHERIES, INC.

Mr. STOLPE. Thank you, Mr. Chairman.

I am here today representing Jeff Reichle, President of Lund's Fisheries, Incorporated, of Cape May, New Jersey. He was planning on being here himself, but a last-minute business situation arose, so he asked me to come and present his testimony.

Lund's processes a wide variety of species from the mid-Atlantic region, including various squid species and Atlantic mackerel. I am here today to urge you to amend the Magnuson Act to eliminate the authority of the Secretary of Commerce to allocate portions of the Atlantic mackerel or other fish quotas to foreign harvesting fleets.

The discretionary authority of the Secretary to allocate shares of the harvest to the foreign fleets is contained in Section 201 of the Magnuson Act, and is commonly referred to as the "Total Allowable Level of Foreign Fishing," or TALFF. An alliance of seafood processors and fishermen on the Atlantic has been formed to pursue an amendment to eliminate TALFF. The current members of the alliance are Lund's Fisheries, Seafreeze Limited of Rhode Island, Point Judith Fishermen's Cooperative of Rhode Island, B and G Lobster and Shrimp Corporation of New York, Seafood Processors of Rhode Island, and the North American Lobster Corporation of New Jersey. The proposal to eliminate TALFF is also supported by the Atlantic Capes Fisheries, Axson and Johnson Fisheries, Cold Springs Fisheries, and Phillips Seafood of New Jersey.

We recommend that TALFF be deleted from the Magnuson Act for the following reasons:

First, the marketing of TALFF products by foreign harvesting vessels cannot be controlled by the Federal Government and could seriously disrupt our efforts to develop and maintain markets for U. S. processed products.

For instance, the two most important export markets for U. S. producers of Atlantic mackerel are Canada and Jamaica. These markets support only a few thousand metric tons of product sales per year. U. S. producers enjoy a small competitive advantage over European producers due to our geographic location. This would immediately change if the Russians, for example, are invited into U. S. waters to harvest mackerel. Attorneys from the National Marine Fisheries Service freely admit that once the foreign-harvested product leaves U. S. waters, the U. S. cannot prevent it from being sold into Canadian and Jamaican markets, even if the company which applied for TALFF provides the U. S. with a written agreement not to sell mackerel into these markets. NMFS has recognized, in its **Federal Register** notice, that there is a pattern of failure to honor commitments made in exchange for TALFF.

Recently, the Russians have been notorious for dumping product into any convenient market in exchange for hard currency. If Russian TALFF product shows up in Jamaica or Canada, the impact of

this intrusion on our market price structure will be disastrous, and it will take years to recoup our losses. The most effective way to avoid this disruption is to eliminate TALFF.

The second reason for deleting TALFF is to eliminate the controversy it has engendered in the East Coast in recent years. In an effort to put deals together inside Russia, U.S. fish brokers have held out TALFF as a bargaining chip. The promise of a new source of mackerel has triggered efforts directed at the fishery management council process, the Congress, and the Administration. We have been forced to aggressively oppose these efforts in order to protect our markets. Both the Mid-Atlantic Fishery Management Council and the Department of Commerce have agreed with our position, but not without full-scale warfare in the administrative process. This battle begins again next year when the Mid-Atlantic Council begins consideration of the fishery specifications for the 1995-96 fishing seasons. Fighting this battle wastes the resources of the seafood industry, the Congress, and the Administration. We want the Congress to end this fight next year.

The proponents of TALFF continue to make the argument that it is necessary to open new markets for U. S. fishermen. We adamantly disagree with this statement. All TALFF does is give the resource away to foreign fishermen. In the **Federal Register** Notice by NMFS zeroing out TALFF for 1993—and that's included in the materials we submitted to the Committee—the Agency stated that history has shown that U. S. fishermen can engage in joint ventures with foreign processors on a stand-alone basis. TALFF, therefore, does not enhance opportunities for U. S. fishermen. It serves only to threaten the markets being developed by traditional fishermen and U. S. producers.

Lund's appreciates the opportunity to testify at this hearing. Attached is a briefing paper we have prepared on this issue, as well as the **Federal Register** Notice.

Mr. Stolpe submitted the prepared statement of Jeff Reichle, President of Lund's Fisheries, which can be found at the end of the hearing.

Mr. STOLPE. And, if I might, on the briefing paper we've enclosed, there's a minor typo, but it means quite a bit.

In the last sentence of the first page [sic], the word "foreign" has been omitted.

Mr. MANTON. Where is that? Page one?

Mr. STOLPE. The last—page one of the proposal, the last sentence in the first paragraph.

Mr. MANTON. Oh, the first paragraph.

Mr. STOLPE. It reads: "The Alliance is proposing that any future harvest of fish in the federally-managed fisheries be prohibited." We left out "foreign harvest" there, a significant "oops."

Mr. MANTON. Could you please repeat that, for those of us who are a little dense, here.

Mr. STOLPE. The Alliance is proposing that any future foreign harvest of fish—

Mr. MANTON. Foreign harvest, OK. We'll add the word "foreign."

Mr. STOLPE [continuing]. in the federally-managed fisheries.

The "foreign" is kind of crucial.

Mr. MANTON. Thanks.

Mr. STOLPE. We're committed to working with your Subcommittee in the coming months, in a cooperative manner, to arrive at a solution which is fair to U. S. fishermen and to U. S. processors. Thank you.

Mr. MANTON. Thank you, Mr. Stolpe.

Our last witness on this panel will be Mr. Tom Fote, Legislative Chairman, Jersey Coast Anglers Association.

**STATEMENT OF THOMAS FOTE, LEGISLATIVE CHAIRMAN,
JERSEY COAST ANGLERS ASSOCIATION**

Mr. FOTE. Thanks. I am also the Commissioner to the Atlantic States Marine Fisheries Commission, representing the State of New Jersey.

Before I start my testimony, I've been sitting here looking out the window, and I grew up about three miles from here, in East Flatbush. I remember, as I walking around this morning in Sheepshead Bay, of all the party and charter boats that used to be there, and of Lundy's, when you used to be able to buy in the fish house. It was hard to see that has gone downhill a lot. Hopefully, it will come back.

But, I walked into two tackle stores, and I remember when those docks used to be filled with party and charter boats. I mean you could not walk around Sheepshead Bay, there would be four of five boats per dock. Now, I see there's probably about eleven or twelve. You used to see them out here fishing.

I mean, I fished under that bridge, if you look on the other side here, the Green Parkway Bridge. I used to go out on the girders, because you weren't allowed to fish from the top. So, it brings back a lot of old memories.

And it's a shame to see the tackle stores over there also look depressed. I mean, it's an industry that's hurting, and it's an industry that needs some help.

The Jersey Coast Anglers Association thanks the Chairman, Congressman Tom Manton, and the Subcommittee on Fisheries Management for conducting this Field Hearing on H.R. 780 in Brooklyn, New York. The JCAA also thanks Congressmen Frank Pallone and William Hughes for requesting Jersey Coast Anglers Association to testify at this hearing.

The Jersey Coast Anglers Association is composed of eighty-eight fishing clubs and organizations with a membership of over thirty thousand anglers. The Association was formed to enhance the sport of angling for all persons and for the preservation and protection of natural resources. We have member clubs and associations in New Jersey, Rhode Island, New York, Pennsylvania, and Delaware. Two of the organizations we represent in the New York Metropolitan Area are Staten Island Federation of Sportsmen's Clubs, with over five thousand members, and the Natural Resources Protective Association, also located on Staten Island. Three environmental organizations that belong to Jersey Coast are the American Littoral Society, Natural Resources Protective Association, and Clean Ocean Action.

Suggested changes to the Magnuson Act:

Who should be appointed to the Council? Each State should have the opportunity to appoint at least three representatives. They should include one commercial fisherman, one recreational fisherman, and the State Director of Marine Fisheries. Other representatives, such as scientists, habitat experts, and the public representatives, should be appointed at large and not be counted against the State's other three representatives.

There has been a great deal of testimony given before this Committee on Council appointments. The Marine Fisheries Conservation Network, which Jersey Coast is part of, has given testimony that commercial and recreational fisherman cannot objectively vote on issues in which they have a financial interest. They have also stated that the Council should have members who are non-users. They stated that more appointments should be made of non-fishers experienced in fisheries conservation and management, because it is felt there would be less economic conflict of interest on their part.

Where would these individuals come from? As for an example, let's look at the composition of the Mid-Atlantic Council.

The Mid-Atlantic Council is comprised of eighteen members. Six are State Directors, leaving twelve appointed seats. Four of the current members of this are professors who work for various academic institutions. Of the remaining positions, one member is a paid lobbyist of an environmental organization, one is the president of a sport-fishing research institution, four are affiliated with the commercial fishing community, and another one is a part-time charter boat captain and professor of Marine Science at a local college. Only the remaining member would meet JCAA's criteria of "non-users."

Although, by definition Mid-Atlantic Council has an abundance of non-users, does that really mean there are no economic pressures on this group? No. That is because it is possible for some professors to apply for grants to do research for NMFS and other organizations. It is tempting to become a "yes man" for those organizations that control your grant money and are in a position to comment on future grant proposals. Just because some people are considered non-users does not mean they are not under the same economic pressure to seek reappointment.

An appointee who is a paid employee of an environmental group would need to support that particular group's agenda, whether or not it was appropriate to a specific management plan. That is the reason JCAA does not support the appointment of any paid lobbyist to Council seats, even if they're representing either commercial or recreational fishermen's groups.

Is there really a problem of non-user participation on the Mid-Atlantic Council? No. If you do not count the State Directors, over fifty per cent of the Mid-Atlantic Council is comprised of non-users. The real problem is trying to find working commercial and recreational fishermen on this Council.

Ultimately, it is the fisherman, either commercial or recreational, who has the most to gain or lose from any Council decision. In its initial legislation, Congress understood and supported this concept, realizing that no plan would be successful unless it involved the people who have to implement and live with the consequences.

It would never be possible to have enough law enforcement to guarantee compliance by recreational and commercial fishermen if they do not believe in the long-term benefits of the plan. We all know that a plan only works with voluntary compliance of a majority of the fishermen. JCAA does understand, however, that some Council members may have a financial interest in certain fisheries, and supports full public disclosure of all these interests on an ongoing basis. The Secretary of Commerce would then have this information when evaluating any plan.

How should Council members be appointed? When a seat is open or if the Governor does not wish to reappoint a current Council member, the Governor must submit the names of three qualified persons to the National Marine Fisheries Service. NMFS shall evaluate their qualifications and consult with either the commercial or recreational organizations, as appropriate, to insure that these individuals represent and have the recommendation of these groups.

If the Governor wishes to reappoint a person for another term, the Governor may submit only that, this Council member's name for reappointment, provided that NMFS has not objected to this reappointment in writing or has not received objections from this organization or the public within the State that this Council member represents. And that's really to stop people from becoming "yes-men" for NMFS. I mean, basically, because NMFS makes the decision who goes on the Council, NMFS can decide, if this person didn't agree with them, off he goes.

Highly migratory and large pelagic species must be put back in the Council system.

After observing the delays and the relative ineffectiveness of NMFS' bluefin tuna and shark management plans, the JCAA is convinced that highly migratory species management should be returned to the Regional Fisheries Management Councils. Though they, too, are ineffective, it's still likely that the Councils can respond at a faster pace and take into account the public's comments, which NMFS has largely failed to do.

The plans produced by NMFS can only be described as elitist. Let's discuss three of the management plans that have come from NMFS without going through the Council.

The swordfish fishery was the first time JCAA dealt with a management plan designed solely by NMFS. Swordfish has been a traditional recreational and harpoon fishery dating back to the 1900's. This fishery has been practically eliminated by the decisions by NMFS. This plan was designed to protect the long-line fleet, which was not, had not fished in the fishery until 1960's, but which now controls almost the entire catch. They had the high-priced lobbyists looking out for their interests.

The management of bluefin tuna is another example. NMFS attempted to manage fisheries for special interests and are being influenced by their lobbyists. About one-third of the bluefin tuna quota is provided to five purse seine vessels owned by three families who are guaranteed millions of dollars from a public resource without bidding or paying any royalties. The only expense, other than lobbying funds, required to keep this incredible abuse of the public trust, is a permit for each boat, the same fee required of an

average fisherman who must compete for a mere opportunity to catch a medium or giant bluefin tuna before the quota is filled.

NMFS, through its management plan, has so restricted the school bluefin tuna catch that traditional party-boat fishery and private recreational boat fishery in Metropolitan New York and New Jersey has almost been eliminated. Thus, the opportunity for the average angler to even catch and keep one school bluefin has been severely restricted. Now NMFS plans to institute an angling permit for bluefin with a similar fee to that of \$20 for catching a valuable giant. Yet, the number of school bluefin allowed to be caught is not equal to the number of anglers who have traditionally participated in the fishery.

Bluefin tuna fishing along the New Jersey coast has been so poor this year that the largest bluefin tuna was a 179-pounder beached by a surfcaster, not by a boat fisherman. If NMFS has their way, in 1994, this individual would be prosecuted for this incredible catch made without a permit, which was only issued to boats in any case.

Through traditional fishery for sharks has been a recreational one and the market for those mako sharks was developed by selling those fish to restaurants, NMFS developed a shark management plan, which provided most of the catch to the commercial side and eliminated the recreational fisherman from selling their catch due to the elitist concept that such fishermen are wealthy and don't have to offset their fishing costs. Sharking has traditionally been the poor man's big game fish, and the sale of an occasional make or thresher made it possible for the average fisherman to enjoy the sport. All recreational fishermen and many charter boat captains and mates are now prohibited from selling sharks unless they can prove that fifty per cent of their income is earned from that business. Yet, NMFS allowed any commercial fisherman to buy shark sale permit, even if he never caught a shark before.

The JCAA endorses legislation that would bring management of the highly migratory species back to the Council. At least the Councils will have to listen to the average fisherman, and take into account his feelings. The common fisherman feels ignored when these plans are handled just by NMFS, without the Council. There is a perception that when it gets at that level, instead if the Council level, it's the high-priced lobbyists who take over. What we get is a "Washington Beltway Plan" designed by Beltway lobbyists, both recreational and commercial, who don't know what is actually happening in the real world. These people are not in the field talking to common fishermen, just rich commercial or recreational fishermen. The Council system allows for public comments and public participation of the common fisherman.

Where the meetings are held. We feel that it is imperative for the National Marine Fisheries Service—and since I'm the Commissioner, the Atlantic States Marine Fisheries Commission—and the Regional Councils to hold their meetings so they are accessible to both the commercial and the recreational anglers who want to testify. These meetings should be held close to major airports or highways so people wishing to voice their opinion and participate in the process can do so with relative ease.

This means, they should not lose a great deal of time in travel. The meetings should be held at a motel or hotel that will not make the cost prohibitive to the average person.

If NMFS was not paying, in full, the cost of lodgings, meals, and other expenses, I wonder if the Council members would be holding their meetings where the cost of a room is over a hundred dollars a day, parking is twenty dollars a day, and an inexpensive lunch costs twelve dollars. Not only is the fisherman losing a couple of days of pay by attending the meeting, but it has also cost him a week's wages. This makes it difficult for the public and the average fisherman to attend these meetings.

The Magnuson Act was designed to involve the public. With the exorbitant cost required to attend these meetings, the spirit of the Act has been weakened.

Habitat. The Jersey Coast Anglers Association feels that in order for the Council to be more effective in their management plans, they should have more input into the conservation of habitat critical for various species under their jurisdiction. The Councils and NMFS find themselves managing a smaller resource because of continuing deterioration of the environmental condition. In the last thirty years, we have seen the loss of crucial nursery habitat in the bays and estuaries due to coastal development. In addition, we are just learning the effects of chemically-induced pollution and the alterations of the sexual and functional development of fish embryo and adults alike.

We recommend the implementation of a policy to protect and restore critical fish habitats in conjunction with the Regional Management Councils and other Federal agencies. Research programs should be developed to address fisheries-related habitat values and the effects of chemical pollution on the ecosystem. There should be greater involvement by the Councils in the National Estuarine Program, as one of the vehicles to accomplish this. There should be also great interagency cooperation and communication with regard to habitat issues.

In the past, we have seen Regional Councils and NMFS being asked to take a larger role in environmental issues, without being appropriated the necessary funds by Congress. It's easy for Congress to give the responsibility to the Council, but it has been very difficult for them to appropriate adequate funds for such a vast undertaking.

If Congress really wants the Regional Councils and NMFS to carry out this important task, they must appropriate the necessary funds.

I would like to thank the Committee for giving me this opportunity to appear before it and to present this testimony. Since we have compiled this information on short notice, JCAA would like the opportunity to make additions to our testimony at a later time.

[The statement of Mr. Fote can be found at the end of the hearing.]

Mr. MANTON. Without objections, you can submit for the record any additional statement.

Well, that concludes our first panel. Doctor Anthony sort of set the stage in the beginning and made some observations that some of the fish stocks have been overfished.

So, I'll put out a question generally to the panel: What do we do about that? And how do we deal with people who necessarily are unable or, as part of the plan, cannot pursue a livelihood? How do we deal with that?

Anybody want to tackle that one?

Mr. Stolpe?

Mr. STOLPE. Yes, thank you, Mr. Chairman.

In years past, the Saltenstall-Kennedy Act Funding, which was a import tariff on seafood——

Mr. MANTON. Do you want to pull that mike in, just a bit? Thank you.

Mr. STOLPE. In years past, the Saltenstall-Kennedy Act provided development funds to the commercial and, later, to the recreational fishing industry, as well. My understanding is those funds are almost entirely now used by Department of Commerce in administrative set-aside, but it seems to me that this might be a good vehicle for redirecting commercial fishing effort to the underutilized species that Doctor Anthony was talking about.

Right now there is, as far as I know, no place that a commercial fisherman can go to get any kind of economic support to get out of a, one of the fisheries that have too much pressure, for whatever reason, and is having problems getting into another fishery. And, my understanding was this was one of the original ideas of the Saltenstall-Kennedy Act.

Mr. MANTON. Mr. O'Malley?

Mr. O'MALLEY. Mr. Chairman, I think one of the things, specifically addressing the groundfish stock, I hope we'll keep in mind. In the midst of all of the agony about haddock, cod, and yellowtail, I would like to make sure that people know that many parts of the commercial fisheries industries—and I use that word in plural—are thriving.

Rhode Island, for example, where many people from Montauk, Shinnecock, Greenport land has just enjoyed its third all-time successive record year not only for the dollar value of the fish that they've landed, but also for the tonnage. They're not out there chasing the last fish for an astronomical price.

This has been done by exploring new fisheries. Monkfish is now the second most valuable fin fish landed in New England. You had to go to much deeper water and you had to make investments to do that.

Value-added products, such as pocket factory trawlers, which are now freezing squid, formerly unsalable, for the export market.

I hope that whatever we do about the groundfish stocks does not destroy those other very, very good profitable fisheries that are tens of thousands of jobs in this area.

As far as groundfish is concerned, if we restore the haddock completely, tomorrow, eighty per cent of it will be landed in Canada. Very few people, when they discuss the landing statistics, point out that in October of 1984, we lost the most productive part of Georges Bank to Canada.

If you have a hurricane go through your back yard or if your factory is nationalized in a Third World revolution, there are certain remedies that you have—whether it's disaster relief or some kind of SBA assistance, or whatever. The loss of the Hague Line should

have been viewed in that light, because suddenly all of the fleet that used to fish east of that line was crowded into the American side.

Now, that may be something that John Bullard will undertake in his new position as Director of Sustainable Development, but as we all know, a lot of these things have to be—whatever we do has to be budget-neutral. There isn't a lot of money around.

And, I think it's going to take a lot of imagination and if it's budget-neutral, it will be done. For example, could we take money that would have gone to the World Bank, purchase a number of fishing vessels in the New England groundfish fleet with that, and send those vessels as part of a foreign aid package to some place in Asia or South America or Africa. Budget-neutral. It gets guys out of the business whole, and reduces the pressure on the stocks enormously.

Certainly everything that we're saying about mackerel, skate could have been said about squid and butterfish ten years ago. There was no squid market.

So, I have great hopes for those markets to develop, but I'm not sure, being realistic about the budget, that we can look to Washington for very much direct financial assistance.

Mr. MANTON. Professor DiLernia?

Mr. DiLERNIA. Regarding ground fish, I'm concerned.

I would recommend an annual assessment to see how well Amendment 5 is working. I think we're going to have to study that very quickly, and if Amendment 5 does not begin to achieve its goals very early on, I think we're going to have to address the issue.

So, regarding ground fish stocks particularly, an annual assessment of those stocks would be very helpful in monitoring how well Amendment 5 is working.

Mr. O'Malley mentioned monkfish and I happen to be Co-Chairman of a joint New England-Mid-Atlantic Monkfish Committee. I also feel that there is potential in monkfish. Our two Councils are working on some management strategies for monkfish, because I'm concerned that, with the passage of Amendment 5, there will be a significantly increased effort directed toward monkfish. If certain regulations aren't in place when that occurs, we could possibly see overfishing of monkfish.

I also don't think that, quite frankly, we have yet discovered all of our natural resources. I just can't help but wonder what exists off the edge of our shelf. We know up to about six hundred fathoms, seven hundred fathoms, probably about eighty or ninety miles off shore. Once we get beyond the shelf, where we can sort of look over the edge, I have hope that perhaps we may find a type of resource that may be there that we haven't even discovered yet.

So, we may have to encourage some additional exploration by commercial fishermen in those areas. It's for that reason that I'm particularly concerned with certain overtures that have been made recently regarding restricting the gear for experimentation. I don't think that's a very good idea.

Also, Mr. Bullard's office, I think has tremendous potential in addressing what's happening with the fishermen that will be displaced as a result of Amendment 5, and I look toward Mr. Bul-

lard's office succeeding with great expectations. I think it has a tremendous potential. I think that NOAA has shown some foresight in creating that position.

Mr. MANTON. Thank you, professor.

Mr. Fote?

Mr. FOTE. Yes, I'll leave the commercial fishermen to talk about commercial fishing.

I'll look at the charter boat industry, what's happened in the party boat industry. I mean a fine example is what's happened over here in Sheepshead Bay, where the number of boats have decreased. Canarsie Pier, as you came in where Canarsie is, used to have four party boats on it. There is none any more.

And I think, because your constituents from out in Queens used to come out on these boats from Sheepshead Bay and Canarsie Pier or out to Captree, was they wanted to bring enough food home to eat for a couple of days. And that's what the Professor was talking about, the subsistence fishermen. They were thinking along the idea that they'd come down here and they'd bring home, you know, a bunch of blue fish or a bunch of fluke and they'd have a couple of meals for their family and it was worthwhile going.

And the bag limits really hurt this. I mean it affects the industry dramatically. I mean, trips cut down, the number of trips people take, and you can see that just in the number of boats.

I mean there's four boats, right now, in Bellmawr, and one is actually taken over by the bank and three are in Chapter 11, because people have stopped going because they cannot bring home what they consider is a right portion to eat for the amount of dollar they're paying.

And that's where you get the subsistence. People just don't go out for fun. They're going out to feed their families and some consideration has to be done under the plan for that.

Mr. MANTON. Thank you, Mr. Fote.

We could be here for the whole weekend discussing these issues, but we have another panel to hear from, and I know that many of you are very busy and may want to get on with other things. In closing, perhaps Dr. Anthony, anything you might want to add to this?

I mean, there are lots of issues and concerns we've heard about in Washington and some of the other places where we've had hearings on conflicts of interest, the makeup of the Councils, et cetera, et cetera. However, I think, generally, we've heard that the Magnuson Act works pretty good, that if it "ain't broke" too badly or isn't broken at all, let's not try to fix it too much. But others believe there are issues that we should be looking at. I think Mr. O'Malley said, however, that we should not do it precipitously. That we should reauthorize the Act, but if we're going to make changes, we should take our time and do it right. Probably, that's the right way to go.

But, with that said, Doctor Anthony perhaps you can close for this panel.

Dr. ANTHONY. Yes. I just want to make a couple of points, that we should really learn from what's happened since the Magnuson Act has been in place for fifteen years.

I think it's very obvious that there are too many vessels chasing too few fish. The fishermen are very good. They're very capable of harvesting three-quarters of the resource annually. We've shown that over and over.

We know that you cannot have sustainable fisheries if you catch that many fish. There must be some way to limit the amount of fish that the fishermen can take.

The difficult point is to tell the fishermen that he or she can go fishing and see all that fish in the water, but they can only remove about one-quarter of what they see, and they have to leave three-quarters in the ocean. They're very capable of taking most of it, because they're very good.

But, what you have to do in order to control that situation is have very strong regulatory procedures in place. You need direct control of the fishermen. You can't use mesh sizes, because they will not do the entire job. They're useful for selecting the right size of fish to take, but they will not control the total mortality of the stock. So, you need direct control of all of the fisheries in place.

Jim O'Malley's point about conserving some and allowing others to proceed is a good point. We need to figure out how to do that, but we must control the fisheries on some of these stocks. We have lost so much money to date that it's unbelievable what we've lost and we're continuing to lose. Monkfish is a good example. We just talked about that, and that stock is overfished.

And we suspect that soon, that will also decline substantially. We're worried about that already. And the others will also follow suit, because the American fishermen are so good today that they can overfish most of these stocks.

So, we must have something in place to regulate these species. We haven't got that in many places today. We can't do indirect controls. The fishermen are just too good. We have to limit the ability of the fishermen to take so many fish and we must find a way to do it.

Mr. MANTON. Thank you, Doctor Anthony, and I want to thank the first panel for being with us. We've learned from your testimony, and hopefully we won't do too much damage when we legislate.

So, thanks again.

I think we'll take about a five-minute break while the other panel comes forward. The next panel will be on seafood safety—Mr. Gordon Colvin, Director of Marine Resources, New York State Department of Environmental Conservation; Mr. Ken Gall, Specialist, Seafood Use and Technology, New York Sea Grant; Mr. Roger Tollefsen, President, New York Seafood Council; Ms. Caroline Smith DeWaal, Legislative and Policy Coordinator, Public Voice; Miss Nancy Longo, Chefs Coalition, Chefs Helping to Enhance Food Safety; and Professor Laxman Kanduri, Seafood Business Management at Kingsborough Community College.

[Recess.]

Mr. MANTON. Ladies and Gentlemen, I think we'll get started with the second panel, the panel on seafood safety.

We'll start off with Mr. Gordon Colvin.

STATEMENT OF GORDON COLVIN, DIRECTOR OF MARINE RESOURCES, NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Mr. COLVIN. Thank you, Mr. Chairman, and good morning.

I'll abbreviate my pre-filed written testimony this morning, for the sake of time, but will be principally addressing the National Shellfish Sanitation Program and its implementation in New York State.

I'd also like to add one remark, relative to fisheries management issues, prompted by the discussion that just took place on the Magnuson Act reauthorization.

In New York, the responsibility for the National Shellfish Sanitation Program rests with the Department of Environmental Conservation. This responsibility principally falls into three areas: classification of shellfish growing areas as approved, not approved, or conditionally approved for the harvest of shellfish; the patrol of shellfish growing areas to prevent illegal harvest; and sanitary inspections of shellfish shippers and processors.

The National Shellfish Sanitation Program has been jointly administered by the U. S. Food and Drug Administration and State Governments since the 1920's. The program has evolved considerably in both sophistication and the nature of the State/Federal partnership since its inception. However, the preeminent feature of the program throughout its history has been the consistent recognition that the primary responsibility for carrying out the three phases of the program identified previously lies with the States.

Since 1981, New York has been an active member and supporter of the Interstate Shellfish Sanitation Conference, or the ISSC, a joint industry/Federal/State government effort voluntarily instituted to administer and implement the National Shellfish Sanitation Program. Through the ISSC, the technical standards and administrative procedures for implementation of the National Shellfish Sanitation Program are adopted and agreed to by all participants.

The Conference Agreement authorizes all States to refuse to admit shellfish products from non-complying States and the FDA is also empowered with their agreement with the Conference, to disapprove shellfish shippers in such States from participation in interstate commerce.

In light of New York's support for the ISSC process, we would like to bring to the Subcommittee's attention some concerns we have about legislative proposals, as well as the current administration of the National Shellfish Sanitation Program by the FDA.

For the current program to be effective, States must be confident that FDA is providing timely, complete, and consistent evaluations of State programs. Indeed, the entire integrity of the National Shellfish Sanitation Program depends upon this.

However, New York and other States have significant concerns regarding tardy evaluations and strong perceptions that, despite recent improvements, FDA's evaluations of a given State are not consistent from region to region. We believe FDA should give much higher priority to completing timely, objective, and standardized evaluations to all States.

It would also be helpful for FDA to communicate more closely with States and to provide more support to the States as the Agency develops initiatives to improve shellfish sanitation programs nationally. The FDA's budget has been increased substantially in recent years to incorporate improved seafood safety programs. Much of this funding has been used to support important new initiatives that will benefit shellfish sanitation programs.

However, the FDA's plans for the implementation of these initiatives were developed without consultation with the States and, not surprisingly, failed to provide any financial support for the improvement of State programs.

Of even greater concern to us is that the single FDA program that provided direct and necessary assistance to New York's shellfish program—the operation of the Northeast Technical Services Unit in Davisville, Rhode Island—received reduced funding. Over the years, this unit has been of great importance and assistance to New York and other States in the region in providing training and specific technical advice on complex issues relating to growing area certification, design, and operation of depuration facilities, and a variety of other issues. In the past two years, very little support has been available from NETSU due to lost capability.

With regard to legislation, we will not comment today on any specific bill that has been introduced in this or past sessions of Congress. Rather, we'd like to offer the following suggestions as to what would be essential components of any Federal seafood safety or inspection bill that relates to shellfish sanitation programs.

First, we feel strongly that such legislation must specifically acknowledge that the lead responsibility and capability for administration of shellfish sanitation programs lies with the States, and that the key Federal role is providing technical and financial support to States and in developing and administering programs to review and evaluate State performance.

We are opposed to proposals that would authorize direct Federal regulation of the classification of shellfish growing areas or other preemption of State decisions made pursuant to the National Shellfish Sanitation Program.

Federal seafood safety legislation should specifically recognize the role of the Interstate Shellfish Sanitation Conference, and the process by which it operates and administers the National Shellfish Sanitation Program.

Most importantly, such legislation should recognize that public health issues relating to the consumption of raw shellfish are by far the most significant public health concerns associated with seafood consumption and that improvements must rely on the administration and delivery of State shellfish sanitation programs.

Therefore, if Congress determines that it is necessary to improve shellfish sanitation programs, the role of State shellfish sanitation programs should be recognized and considered the highest priority for increased Federal funding associated with such legislation.

In the event that the Subcommittee wishes to address specific legislative initiatives, we would subsequently prepare specific comments on such proposals. We look forward to continuing this dialog on the important issue of shellfish sanitation programs and the nation's seafood safety concerns.

If I may, Mr. Chairman, a brief comment relative to a Magnuson issue that came up this morning. I was pleased to hear the discussion by Mr. O'Malley and Professor DiLernia that related to monkfish.

Professor DiLernia pointed out that there has been a proposal advanced to begin to address the needs of monkfish, through the establishment of a minimum size limit. The concept that's been agreed to in that case is kind of similar to what Mr. O'Malley spoke of, that some industry people had proposed for groundfish a few years ago.

And, that is, before we can do a full management plan and address all of the problems of the resource pursuant to the 602 guidelines, let's at least put, in this case, a minimum size limit on. Rather than address the problem from the perspective that the problem with groundfish generated, the proposal here is for the States in the region where monkfish are landed to voluntarily and individually establish a minimum size and possession limit for monkfish landed in their States, and that this could be an important first step. And, I think most of the States are willing to do that. I know New York is, and we're in the early stages of rule-making, just having received, within the last two weeks, the information on what the necessary minimum size limit is.

The difficulty we see is that, as I believe has been pointed out to the Subcommittee in other contexts, we have unfortunately some concerns about some Federal court decisions that may impede the ability of States to adopt regulations on fisheries that cross State and EEZ lines, in the absence of a federally-approved management plan under the Magnuson Act.

It would be unfortunate if something like this initial step on monkfish were impeded from a voluntary, successful implementation by the States, in partnership with the Councils and the fishing industry, on the basis of some of these court decisions that we have these great concerns about, and I just thought I'd bring that to the Subcommittee's attention, Mr. Chairman.

I thank you for the opportunity to testify.

[The statement of Mr. Colvin can be found at the end of the hearing.]

Mr. MANTON. Thank you, Mr. Colvin.

Our next witness will be Mr. Ken Gall.

STATEMENT OF KEN GALL, SPECIALIST, SEAFOOD USE AND TECHNOLOGY, NEW YORK SEA GRANT

Mr. GALL. Thank you, Chairman Manton, and members of the Committee.

I am the seafood technology specialist with New York Sea Grant, which is a joint program of NOAA, Cornell University, and the State University of New York. Sea Grant is a national network of university-based programs in each of the coastal and Great Lakes States which seeks to stimulate wise use of our coastal resources through research and public education.

I am also a member of the faculty here at Kingsborough Community College.

What I'd like to do today is provide abbreviated remarks from my written comments, and I'd like to make some general statements on overall seafood safety and then focus in on education and research and training initiatives.

There is a considerable gap between public perceptions about seafood safety and the known, quantifiable risks associated with seafood consumption. There appears to be a general agreement among the scientific and regulatory community with conclusions from several recent reviews of seafood safety. The National Academy of Sciences' Seafood Safety Committee, in their 1990 report, characterized the seafood available to the public as being an important part of a healthy diet that's wholesome and unlikely to cause illness.

The FDA has also examined seafood safety and has made statements that the vast majority of seafood is safe and Americans can be confident that the seafood they buy will provide a healthful meal.

I'd also like to note a recent FDA risk assessment that, looking at food borne illness from microbiological organisms, the FDA estimated that risk of illness from seafood may be ten times less than that from chicken; and the risk of illness from properly cooked fish is even significantly lower.

So, although we may be able to characterize the overall seafood supply as safe, there are specific concerns that require our attention, just as there are for all foods. These concerns are primarily associated with certain specific products, specific harvest areas, or errors in food-handling practices. A combination of research, education, and adjustments in regulatory policies and procedures will be needed to improve our ability to deal with these well-defined issues.

My specific points relate to my area of expertise: education, training, and research needs.

Seafood Education Needs: Seafood is a unique commodity that's widely misunderstood by many consumers. There are probably more myths and misconceptions about seafood than any other food, and it's become increasingly difficult for many consumers to separate fact from myth and hype from reality.

Consumers, in general, need access to more information that will help them become familiar with the variety of seafood products in the marketplace. They also need to know how to select products to meet their own individual needs or concerns, whether they be related to nutrition, safety, individual health status, economic or other factors; and they need to know how to buy, handle, and prepare seafood properly.

We need to recognize that, unlike meat and poultry, up to twenty per cent of all fish and shellfish consumed in the U. S. is caught by recreational or subsistence fishermen for their own personal consumption or for that of their family or friends, and this twenty per cent is not subject to the same safety controls as the rest of the commercial seafood supply.

We need to also recognize that there are specific segments of the population, such as anglers, who may eat large amounts of fish that could contain elevated contaminant levels who may be at increased risk because of their own personal consumption practices;

and other individuals, such as the immuno-compromised, who may be at increased risk because of their health status, as well as their individual consumption practices.

To address these realities an enhanced general seafood education effort is needed, as well as targeted initiatives for groups at risk. Existing national education networks like Sea Grant have the expertise to expand their seafood education programs, but additional resources will be needed.

Inspection and HACCP. There has been considerable debate about seafood inspection. The reality is that significant regulation does occur at the Federal, State, and local level, and the seafood industry has supported the concept of enhanced regulation for many years. There is widespread recognition that HACCP is the preferred approach to enhanced seafood safety control, and both the industry and government have worked extensively to develop a HACCP system for seafood.

HACCP training programs are being held across the country, and many businesses are actively evaluating HACCP and/or developing a HACCP plan. What we need to consider now is how HACCP will be implemented.

Based on our experiences here in New York, it's clear that HACCP can be effective, but developing, implementing, and operating under a HACCP system is going to require considerable time, effort, and expense.

Small businesses, in particular, which still comprise a major portion of the seafood industry here in New York, as well as other parts of the country, are likely to need help to successfully implement a HACCP plan. These businesses will need technical assistance from programs like Sea Grant, but again, to meet this challenge, additional resources will be needed.

Water Quality. We need to recognize that the quality of our marine and freshwaters are crucial to the immediate and long-term safety of the nation's seafood supply. Seafood products and the seafood industry carry a disproportionate burden of the impacts of environmental failures, both in terms of real effects on seafood quality and safety, as well as public perceptions about the quality and safety of seafood. Continued research and public education efforts to maintain and improve water quality are needed and should be supported.

Finally, I'd like to comment on several research needs. There is a need for continuing and applied research to develop effective tools to monitor seafood products. For example, new valid indicators for pathogens in shellfish and shellfish growing waters, along with improved laboratory and field tests, are needed.

Applied research is needed to help the seafood industry refine processing procedures and other systems designed to eliminate microorganisms. Rapid, inexpensive field tests to measure finfish toxins like scombrototoxin and ciguatera are also needed.

We need better information on which to base our current assessments of risk. This includes accurate estimates of seafood consumption for specific regions of the country, ethnic and socioeconomic groups, and special populations like recreational and subsistence anglers.

And, finally, information on seafood safety is needed to facilitate comparison of risk from one food to another, that will help consumers to evaluate safety issues in the context of their overall diet.

Thank you.

[The statement of Mr. Gall can be found at the end of the hearing.]

Mr. MANTON. Thank you, Mr. Gall.

Mr. Tollefsen, please.

STATEMENT OF ROGER C. TOLLEFSEN, PRESIDENT, NEW YORK'S SEAFOOD COUNCIL

Mr. TOLLEFSEN. Thank you, sir.

I am Roger Tollefsen, President of New York's Seafood Council.

New York's Seafood Council was founded in 1990, as New York seafood industry's marketing and promotion organization.

Mr. MANTON. Mr. Tollefsen, excuse me.

Could you just position that mike a little bit in your direction?

Thank you.

Mr. TOLLEFSEN. Sure. Is that better?

Mr. MANTON. Yes.

Mr. TOLLEFSEN. Its members include baymen, fishermen, lobstermen, wholesalers, shellfish dealers, processors, retailers, restaurants and party and charter boat operators. We welcome this opportunity to discuss issues of seafood safety, and we'd like to begin by making several clear statements that state our position.

1. Seafood is safe to eat and concerns about safety issues do not warrant a crisis approach to resolve them.

2. When seafood safety issues have been sensationalized as a crisis, the consumer has shied away from seafood products. Because of this, the consumer may be deprived of nutritional and healthful food source which may result in creating an even greater overall personal risk.

3. Development of a comprehensive seafood regulatory inspection program is a long-term goal and that has been supported by the seafood industry for years.

About seafood safety, seafood is safe. New York Seafood Council does not off-handedly make the claim that seafood is safe. We offer repeated conclusions of professional organizations whose job it is to know and whose statements speak for themselves.

In its 1990 "Seafood Safety" report, the National Academy of Sciences concluded that most seafood available to the public is wholesome and unlikely to cause illness. The FDA has estimated the risk of food borne illness may be at least ten times less for seafood than for poultry. The risk of food borne illness from properly cooked seafood is even significantly lower.

The FDA went further on to state that the vast majority of seafood is safe to eat and that Americans can be confident that the fish they buy will be a healthful meal.

The marine environment is the business place of the commercial seafood industry. The seafood industry has been a leader in encouraging action that improves water quality and the overall condition of our marine resources. Despite past problems, there are successes that should be acknowledged.

Decades ago, contaminants such as PCBs and DDT were carelessly allowed to enter our environment and spread to detectable limits in almost every food source from land or sea. Only recently have we even tested for these contaminants and recognized them as a problem. Today, the introduction of these contaminants into the marine environment has been virtually eliminated.

One has to acknowledge that progress is being made and the fact that we are going in the right direction. However, we do not possess a magic wand that will make all past mistakes go away, nor do we have unlimited resources to squander without considering relative gains. Things really are getting better and will continue to do so as we learn to better understand man's impact on our own environment.

Making seafood safety a crisis issue will increase personal risk. Almost everything we eat puts some of us at personal risk, but we must eat something. While the consumption of seafood has a proven record of healthful benefits, concern has been raised about potential contamination. As science gets better at detecting smaller and smaller levels of contaminants, it is possible to detect contaminants in almost anything, including seafood products.

What is there to do and how do we assess personal risks relative to the need to eat? The consumer needs guidance through education to be able to understand the difference between detection of a toxic substance and taking a controllable risk.

Special interest groups should avoid tactics of using scares of detectable levels of contaminants that pose no significant risk as a means of discouraging the consumption of seafood.

Seafood affords so many positive nutritional benefits that they far outweigh the demonstrated controllable risks of contaminants. If the consumer was driven away from eating seafood because of a perceived contamination risk, that consumer may very likely be actually increasing their relative risk due to consumption of other less healthful food groups.

Seafood inspection. Food inspection programs have traditionally been developed in response to a need, such as an outbreak that affected public health. One of the reasons a more comprehensive seafood inspection program does not fully exist today is because seafood has been so relatively safe that there was little historical need for it.

However, there are areas that can be improved and the industry has worked hard to develop programs to deal with them.

As recently as 1990, New York's Seafood Council undertook the first industry pilot demonstration program that incorporated principles of HACCP, for Hazard Analysis Critical Control Point. HACCP is a type of process control.

Twenty retail seafood stores and twenty commercial vessels voluntarily participated in this program. Based on New York's involvement in this project, members of our Council were invited to participate in a national program that helped develop current models.

The seafood industry is leading the way in helping the developing and implementing of this system which is superior to existing inspection programs in place in other parts of the food industry.

New York's Seafood Council supports the continuing development of an improved mandatory seafood regulatory inspection program, and agrees with the recommendation of the National Fisheries Institute, which is the largest association representing the commercial seafood industry in the United States, as presented in a published statement entitled, "Statement in Support of Improved Mandatory Seafood Inspection Programs," of April 1993.

In conclusion, New York's Seafood Council urges this Subcommittee to recognize that the healthful and nutritional benefits of consuming seafood far outweigh any negatives associated with it. It would be a disservice to the public if unsubstantiated "facts" were allowed to confuse the consumer of a crisis in seafood safety and drive them to less desirable food sources that would create overall greater personal risks.

We encourage the Subcommittee to adopt a supportive role that logically and consistently works toward development of a seafood inspection program that will undoubtedly serve as a model for the entire food industry.

Thank you.

[The statement of Mr. Tollefsen can be found at the end of the hearing.]

Mr. MANTON. Thank you, Mr. Tollefsen, for your remarks.

Miss DeWaal? Am I saying it right?

Miss DEWAAL. Yes, that's right.

STATEMENT OF CAROLINE SMITH DeWAAL, DIRECTOR OF LEGAL AFFAIRS, PUBLIC VOICE FOR FOOD AND HEALTH POLICY

Miss DEWAAL. Good morning, Mr. Chairman. It is still morning, isn't it, and also the other members of your Committee, who I'm sure also care deeply about this issue.

My name is Caroline Smith DeWaal, and I'm Director of Legal Affairs for Public Voice for Food and Health Policy. We're a national non-profit education, research, and advocacy organization that promotes a safe, nutritious and affordable food supply.

I'm joined today by Nancy Longo, a member of our Chefs Coalition, which is Chefs Helping to Enhance Food Safety. This is a coalition of over six hundred chefs and food professionals. In addition, over a hundred chefs in New York are members of our coalition and support the enactment of comprehensive mandatory seafood safety legislation.

I have brought a copy of that list of our New York members to be attached in the record.

I want to focus my remarks today on the acute gap in public health protections caused by inadequate State and Federal seafood safety programs. Public Voice has been urging Congress to fill these gaps by enacting a comprehensive mandatory seafood safety program since 1986.

Seafood poses multiple hazards to the nation's consumers and it is the only commercially available food, flesh food, harvested in the wild from an environment that may be contaminated with sewage, pesticides, and industrial chemicals.

Seafood can also contain natural toxins that cause illnesses and, in some instances, even death. Despite these potential risks, sea-

food is the only commonly consumed flesh food not subject to a comprehensive mandatory inspection program.

There are three thoughts that I want to leave you with today.

First, contaminated seafood is not just a potential problem. It is reaching the public and making consumers seriously ill. In the last two years, report after report from the National Academy of Sciences to Consumer Reports Magazine have found evidence that spoiled seafood, contaminated seafood, or seafood containing dangerous natural toxins finds its way to our nation's consumers.

The Washington Evening News on Wednesday night carried the story about a Maryland man who just died after eating raw oysters in Florida. This is the second death in Florida this year, and it follows nine deaths from eating oysters in Florida last year.

The reason, in large part, is the failure of a patchwork of mostly voluntary Federal and State programs to monitor and stop contaminated seafood.

Not surprisingly, consumer confidence in the safety of the seafood supply continues to decline.

Second, FDA has announced, but not proposed, new mandatory HACCP regulation. This is a step in the right direction, but it won't solve the many problems with seafood safety. Even with HACCP in place, FDA currently lacks the enforcement and oversight capability to close down processing plants that are not operating in compliance with FDA's rules, to close down polluted harvesting waters, to regulate boats used to harvest seafood, and to regulate trucks used to transport seafood.

In addition, HACCP will not address the failure of FDA to set legally binding tolerances for seafood contaminants or to sample seafood adequately to insure that it is safe to eat.

Finally, Congress still has an important role to play to assure that seafood is made safer. To correct the inadequacies in FDA's existing authority and to provide the wrap-around regulatory program necessary for a HACCP program to work effectively, Congress needs to enact comprehensive mandatory seafood safety legislation.

FDA has never had the authority or funding necessary to regulate seafood adequately. Only Congressional action can correct this situation and assure that consumers are adequately protected.

Since 1990, over seven bills have been introduced and many hearings—I think over twelve—have been held. Last year, a bill was introduced by six ranking Democratic and Republican Senators, including the majority leader. However, the legislation died as a result of the Bush Administration's opposition and the seafood industry's push for a weak program that would provide a Federal seal of approval, without adequate public health protections.

At your hearing in June, Energy and Commerce Committee Chairman John Dingell said that this session he is ready, willing, and able to proceed with omnibus seafood safety legislation, saying that we must have strong comprehensive seafood safety programs in place.

Passage of seafood safety legislation in this session of Congress would be a win for Congress. It would be a win for the Clinton Administration, a win for industry, and a win for consumers.

Action by your Committee to move this important issue forward will help to reduce the risks. It will help keep contaminated seafood off the market, prevent unnecessary illnesses, and it could even save lives, so I'm happy to see you're holding this hearing and I hope to work with you on your continued efforts.

[The statement of Ms. DeWaal can be found at the end of the hearing.]

Mr. MANTON. Thank you, Miss DeWaal.

Miss Longo?

**STATEMENT OF NANCY LONGO, CHEF/OWNER, PIERPOINT
RESTAURANT, BALTIMORE, MARYLAND**

Ms. LONGO. Yes. I'd like to introduce myself. I am Nancy Longo. I'm the chef/owner of a restaurant in Baltimore called Pierpoint, which I have opened about four years ago. I've been a chef for about nine years.

Prior to opening Pierpoint, I was a chef in a restaurant called "Something Fishy." And, I might add, during my time at this restaurant, "Something Fishy," which strictly served seafood, I tried over two hundred and fifty different types of fish and shellfish, worldwide. So, I had a pretty extensive experience with fish.

Some time ago, I became a member of Chefs Coalition, and as Caroline told you the information about them, who were working strictly with the fish inspections and legislation to protect consumers from contaminated, uninspected seafood. I wanted to come today to talk to you about what happened to me and what has affected me both professionally and personally.

In late 1990, November of that year, I developed lesions on my hands and arms, and I was sick for about three months, and only recovered following surgery in January of 1991 to remove lymph nodes from my elbow. My doctor told me that the cause of my illness was bacteria from contaminated seafood and possibly from the handling of seafood, but could have been from ingesting. But, in all actuality, I think it was from handling.

Even though I was treated with antibiotics and anti-inflammatory drugs for weeks, the lumps had formed into my elbow and failed to go away until after they were treated surgically. This was very painful for me. I experienced a lot of trauma, working, because I lost a fair amount of usage of my hands and I was sent for nerve tests and other tests to see if, in fact, this had done permanent damage.

I was also told afterwards that I couldn't work for a few weeks, and I was sent for tuberculosis tests and all types of other tests. Which, if we all know anything about tuberculosis, that means that a chef or a person handling food cannot cook, which was also very traumatic for me as a chef and an owner of this restaurant.

The illness has left me with a lot of long-term effects and this irreversible nerve damage which I do have in my arm causes recurrent pain. Despite the fact that I feature seafood in my restaurant, I no longer eat it and I don't even touch it unless I'm wearing rubber gloves or carrying tongs, because of the fact that it eats through my skin.

On a professional level, this experience highlighted for me the care I must take in serving seafood to my customers. I am especially cautious about choosing fish that appears fresh and wholesome and cooking it thoroughly. Even with these cautions, however, I cannot detect all potential hazards that are present in fish.

Fish that looks and smells perfect can still contain natural toxins like scombroid poisoning or ciguatera, chemical contaminants, mercury, and pesticides. Let me give you an example.

Two years ago, everyone came up with this wonderful fish and they said you have to try it. It was called escolar. I put it on my menu, not knowing a whole lot about it, until a customer brought to my attention that it caused diarrhea. There was actually an article in the New York Times about it, which happened to come to me, as I said, after the fact.

I did further research and found out that this particular variety of fish did cause the common side effect of diarrhea. Needless to say, I stopped serving it. However, I was never officially contacted by the FDA, the local health department, or any of the fish purveyors, to warn me about these side effects.

This experience made me concerned, despite the fact that I had taken the best efforts and care, that there may be other substances in fish products that I don't know about and I'm not being warned about.

As a chef and restaurant owner, I am accountable to my customers, who are becoming more concerned about the safety of fish that they eat. When a customer becomes ill following a meal, fish is frequently suspected. The absence of a mandatory Federal inspection program for seafood heightens my concerns about the product.

Seafood safety legislation that provides a targeted approach to the potential safety problems would, I believe, provide a safer, cleaner product. It would also help give me and my customers greater confidence in the product that would ultimately protect me from the liability concerns that I have, and that is a big concern of a lot of restaurant owners, the liabilities.

This change would ultimately help the seafood industry, as well. Once people have a greater assurance of the safety of the product, the demand will surely increase.

Chefs Helping to Enhance Food Safety coalition was formed to give professionals like myself a voice in the policy debate on seafood safety. As chefs and restaurant owners, our livelihood and reputations are at stake every time we prepare a meal.

Thank you for inviting me to testify today on this important health issue.

[The statement of Ms. Longo can be found at the end of the hearing.]

Mr. MANTON. Thank you, Miss Longo.

The final witness on this panel, Professor Laxman Kanduri.

STATEMENT OF PROFESSOR LAXMAN KANDURI, SEAFOOD BUSINESS MANAGEMENT, KINGSBOROUGH COMMUNITY COLLEGE

Mr. KANDURI. Thank you, Chairman Manton, and members of the Committee and all the participants that are here.

I am Laxman Kanduri. I am a Professor here at the Seafood Business Management at the Kingsborough Community College of the City University of New York. And I welcome you, on behalf of President Goldstein, Dean Drucker, Faculty and Staff of the Marine Technology Program of Kingsborough Community College.

As you've been hearing in past testimonies, in the recent past, the regulatory agencies such as the U. S. Food and Drug Administration, the national Marine Fisheries Service, the United States Department of Commerce, and the industry have been trying to address the consumer concerns regarding the necessity to insure the safety of seafoods.

At the other end of the coin is the commercial aspect. The U. S. is one of the largest exporters, as well as importer, of seafoods in the world, and this makes an additional significance to the assurance of seafood safety, especially with regard to the new EC regulations that have come up after the consolidation of the European Economic Community.

Ideally speaking, to insure hundred per cent seafood safety, the entire seafood supply, that amounts to billions of pounds of domestic as well as imported seafood intended for consumption should be somehow inspected and verified for safety. However, to achieve such a mammoth goal would involve colossal manpower and financial resources, and therefore makes it virtually impractical.

As again you have heard the testimony about the pending legislation about mandatory seafood inspection and the concept of HACCP, the concept of HACCP is an alternative solution to effectively inspect seafood products and to insure seafood safety, and HACCP is, again, is an acronym for Hazard Analysis and Critical Control Points.

This is a system based wherein the industry is made responsible to formulate an inspection plan and monitor their own inspection plan, along with maintaining precise records of each plant activity. The inspectors of the State and/or Federal regulatory agencies will then verify the inspection and plan and records and confirm that a good safety program is in place in each facility. That sums up what HACCP is.

Such a systematic approach will insure a safe product through a more effective inspection. In other words, the HACCP-based system would provide a direction to the inspecting personnel, so that they can focus their efforts in critical areas, and also such a system will result in increased productivity and will allow for a better utilization of already-shrinking government budget and manpower resources.

However, for the successful implementation of the HACCP program, it will require trained personnel.

The Seafood Business Management Program of KCC happens to be the only one of its kind in the country offering a two-year degree, and President Leon Goldstein of the Kingsborough Community College is well-known for his farsightedness in recognizing the need of special educational needs of the industry.

President Goldstein encouraged and supported for the development of a HACCP-based curriculum for the college Seafood Business Management program. While recognizing the college's excellence and the uniqueness of the program, the National Marine

Fisheries Service of the U. S. Department of Commerce recently provided a grant for \$93,000 to the College for developing and providing training in the techniques of the HACCP-based quality control programs and it's just completed within the past year. Our students qualified this HACCP training by high percentage and even passed the NMFS Certification examination conducted on-site.

As you're also aware, the Office of Seafood of the U.S. FDA is currently in the process of submitting its newest proposal for government regulations, a HACCP-based program concerning seafood inspection, and it's probably going to be publishes in the **Federal Register** in the next thirty days or so.

The new regulations will be based on a HACCP-based system and, therefore, the current workforce of the FDA and the new employees in the profession need to be retrained in the HACCP-based approach to the seafood inspection.

In this respect, Kingsborough is uniquely situated in New York City, with the highest per capital seafood consumption in this country, and also it has the second largest seafood market in the world, that being the Fulton Fish Market. And secondly, Kingsborough is serving the function of providing a workforce that is professionally trained in the latest skills, and it is educating and training the inner city youth in skills with a potential of lifetime gainful employment.

Kingsborough not only trains the current FDA employees who are enrolled part-time in the College program, but also has in internship program with the Regional FDA office in New York to employ full-time students from the program.

The Kingsborough would like the Committee to recognize and recommend the Federal regulatory agencies to make use of the great facilities and the program at Kingsborough to train their inspectors or retrain their current workforce in HACCP-based approach to food inspection. Secondly, to recommend Kingsborough as a Northeast Regional Training Center for regulatory agencies dealing with all aspects of training in HACCP-based systems in the future.

And, I thank you for giving me this opportunity.

[The statement of Professor Kanduri can be found at the end of the hearing.]

Mr. MANTON. Thank you, Professor Kanduri.

Well, I'm particularly interested in Miss Longo's testimony, because obviously she has suffered greatly and I'm just curious to know whether there would be a difference between the kind of handling that you do as a chef, which would be on a daily basis, and whatever perils that might cause to your health.

Could we say that this would also apply to a casual consumer of fish or someone who, perhaps, even had fish two or three times a week, as a consumer, rather than one who is actually handling fish several hours a day?

Ms. LONGO. According to the physician that I went to, after having this surgery I continue to have problems in my arm and went back to him and I asked him about this, and he said that this was, in fact, a random case, and that it could be a random case with anyone. Because, in effect, he thinks that what happened was I handled a piece of shellfish and a fin that was contaminated with

something lodged itself in my hand and the contamination spread into my arm.

So, he said it could happen again. It may not happen again. So, it was random. It could happen to anyone.

Mr. MANTON. Did you learn whether there are many people that suffer the same kind of malady?

Ms. LONGO. Well, ironically, I met a gentleman in my restaurant one evening who had exactly the same thing happen to him, but he said his was from consuming seafood, and it lodged in his elbow and actually was eating through bone.

Which, as I say, was very ironic, because you don't usually meet people who have the same illness, but as I said, the physician said that this could happen to anyone and it could reoccur.

You know, my illness was so severe that since then, I've had lymphatic problems in both of my armpits and have been instructed by doctors to not even use commercial anti-perspirant. So, I've had to go to natural things.

Mr. MANTON. And this malady is caused by just the handling of the fish?

Ms. LONGO. Correct.

Mr. MANTON. If ingested, too?

Ms. LONGO. Correct, but he said, in all actuality, that's what he thinks had happened and this was, you know, done at the Hand Center in Maryland, which I think is pretty reputable. He doesn't think that it was from me ingesting something. He thinks it was something that was handled improperly.

Mr. KANDURI. Can I answer that question?

Mr. MANTON. Excuse me, Professor? What did you say?

Mr. KANDURI. Can I clarify that question?

Mr. MANTON. Clarify the question? Sure.

Mr. KANDURI. It's a common occupational hazard for people who are handling fresh shellfish and finfish. It's caused by a marine organism called vibrio vulnificus, which is very commonly found in marine waters. And sometimes this is a common occupational hazard with fishermen, and it's been reported in cases in Virginia, in Maryland, in Florida, earlier.

Mr. MANTON. OK, and the follow-up on that would be, what, if any, is the threat posed to the general public, who usually only have a casual contact with fish or shellfish, sometimes raw, but most times cooked?

Mr. KANDURI. Yes, again, it's random and it's, the number of cases reported have been very significantly small. So, I guess that's—you have to look at that in that perspective.

Mr. MANTON. Well, thank you for the clarification.

Miss Longo, as a chef, a professional chef, are there ways to cook oysters that would destroy vulnificus, if I'm saying it correctly—the biotoxin responsible for recent deaths?

Ms. LONGO. That, I couldn't answer for you, because I haven't done enough research on that, to be honest.

Someone else here may know.

Mr. MANTON. Miss DeWaal, we've heard some numbers here that there's ten times the risk in chicken or the consumption of chicken than there might be in consuming fish. Is that figure accurate or do you want to comment on that?

Miss DEWAAL. Well, actually I was interested to hear that. That's based on a risk assessment that FDA issued probably two years ago.

In that same risk assessment, they found that illnesses caused raw mollusk and shellfish, they estimated, were one in one-thousand. They have since backed off that risk assessment saying the CDC data is so inadequate and it's all based on guesswork and we really can't tell you accurately what the risks are.

So, I think those numbers are somewhat out of date. There are a lot of questions about how, you know, is this riskier than hamburgers or chicken? I think we are seeing a lot of risks in the food supply and I'll agree with one of the witnesses in that we haven't had a "Jack-in-the-Box" situation with seafood, yet.

But, last year we did have one multiple outbreak we're aware of from imported tuna that made seventy-nine people in five States ill, and that's just what were reported illnesses.

Mr. MANTON. Imported from where, if you know?

Miss DEWAAL. Ecuador.

And, we also had nine deaths last year, just in one State, reported—again, reported, because we know a lot of these illnesses are not reported—and that's from people consuming raw molluscan shellfish.

So, we know that there are risks out there. We haven't had a "Jack-in-the-Box" yet. I hope we never do.

But, I think Congress has been looking at this issue for a long time, and there's clearly some need for improvements in the system.

Mr. MANTON. You know, it seems to me that, thank God, having led a relatively healthy life, that all of the things I like and have been consuming for many decades now put me at risk. I guess, all of life has a risk in it, whether it's the air we breathe or the food we eat. So, I think the idea of risk assessment is an idea whose time has come, in the totality of the environment and everything else. Because, just about everything we do, I suppose, can be somewhat degrading to our health. It's a question of to what degree.

If we consume lots of beef and foods high in cholesterol, these are things that I always liked, still like, we put ourselves, our health, at risk. But, I'm trying to be a little careful these days. However, it seems clear we should not get hysterical, I guess, is the answer, and we should approach these health concerns in an objective way, knowing that there are some risks. We need to ascertain what the risks are. Are they minimal, or are they life-threatening?

Now, it seems to me that what we're talking about on this panel is whether or not we should have government-mandated regulation or should we simply allow for some kind of voluntary industry efforts to see to it that we maximize our seafood safety. And, I just wonder, in general, if any of the panelists would want to talk about that?

I think you all agree that we want to maximize seafood safety, but what is the answer? Draconian governmental regulation or some kind of self-policing?

Mr. Tollefsen?

Mr. TOLLEFSEN. One of the problems with going to a strictly voluntary system is that it still leaves open the door for criticism and

crisis creation, and that's one of the problems that the seafood industry is realizing today.

A mandatory inspection program offers many advantages in, certainly, consistency, and hopefully a mechanism which goes back and allows for funding, where voluntary systems may not offer that.

So, the seafood industry, I think, is pretty unanimous in support of the fact that they encourage the introduction of mandatory HACCP-type programs.

At the same point in time, we still want to stress the fact that the benefits of the seafood right now are significant and the consumer should not be scared away from going to other food sources because of this possible crisis situation. There is not a crisis at this point in time in seafood safety, and that is the message that should be out here, but the industry is clearly working toward developing a better type system, even better than existing inspection program systems that exist for other food groups.

Because they have fallacies and they have faults, and just the inspection program does not solve the problems. Like the Jack-in-the-Box, it was inspected, OK? So, inspection doesn't solve the problems, but it provides a vehicle to go back and expand the likelihood that conditions like this don't happen.

So, we do support mandatory.

Mr. MANTON. Mr. Colvin?

Mr. COLVIN. A couple of points in response to that question, Mr. Chairman.

First, with respect to shellfish, I think it's probably true that in virtually every State in which shellfish are produced. And, in probably all of the inland States, by now, there is mandatory inspection at the State level, as part of the National Shellfish Sanitation Program. And, in the absence of it, the ISSC process would call for the sanctioning and the prohibition on interstate shipment of shellfish from those States.

It is not the kind of an inspection program, perhaps, that beef or poultry are subject to. It's a different kind of inspection program, but we think it does the job or is capable of doing the job, provided the States have adequate resources to perform the inspections that the program calls for.

A couple of other points. I think that there's probably a lot to be said in favor of mandatory seafood inspection, not the least of which is the benefits that it would provide for the industry through improved consumer confidence.

I think Mr. Tollefsen made a good point, though. If one looks at the most difficult, the most risky problems associated with the consumption of seafood, we may not be at a point where a seafood inspection program will resolve all those problems, and they can't be overlooked. Much has been said this morning about concerns about scombrototoxin, or ciguatera or naturally-occurring marine biotoxins or toxins associated with naturally-occurring marine bacteria like vibrios. These are not problems that are resolvable readily today, with today's technology, through inspection programs.

The same is true for the artificial contamination by human pollutants—heavy metals, PCBs, and so forth. These are difficult problems to resolve through mandatory inspection and they need to be

resolved in other ways, not the least of which is the continuation of the effort now ongoing to develop, through research, rapid diagnostic testing procedures for marine toxins and to substantially improve, as has been called for, the progress toward the establishment of tolerances for toxics and to improve the level of effort in monitoring seafood for the presence of toxic substances.

Those need to be done, perhaps even at a greater priority than a mandatory inspection program that primarily addresses quality and spoilage.

Mr. MANTON. Miss DeWaal?

Miss DEWAAL. I have a couple of comments. I'm glad to see I'm in substantial agreement with both of the last two speakers.

I want to bring to your attention that the Interstate Shellfish Sanitation Conference, which coordinates the States and Federal and industry efforts to mandate shellfish safety, has been a voluntary program. And voluntary programs suffer from some difficulties.

I mean, the ISSC hasn't been able to deal with the vibrio vulnificus problem, in part because it's a regional problem and, you know, some States just don't want to—it affects commercial interests in different States.

So, voluntary—

Mr. MANTON. Can I ask you a question?

Miss DEWAAL. What's that?

Mr. MANTON. Should shellfish be treated as different from ordinary fish? I mean, it seems to me that there may be more risks in shellfish than there are in fin-fish, and that maybe it's a different case?

Miss DEWAAL. The risks are slightly different, and I think that there is clearly more of a crisis in confidence in shellfish because of the recent deaths.

So, shellfish certainly needs greater surveillance, but shellfish also has been subject, traditionally, to greater surveillance, and those efforts have not addressed the problems that we find on the market right now.

I think there is a need for more Federal oversight of these efforts, to give FDA greater control, and I probably would have some differences from our first speaker today on the role States should play.

Another point I really want to share with you is that meat and poultry inspection shouldn't be a model for seafood inspection. HACCP is an appropriate method and, actually, USDA is also considering HACCP in meat and poultry plants, but HACCP needs to be part of a regulatory program. It can't be the whole regulatory program, because it's really quality control, you know, industry self-regulation, and you need checks on that, to make sure it actually works.

And inspection also shouldn't just be visual inspection. I mean, that's where the meat and poultry inspection program really fell down, in the case of the Jack-in-the-Box outbreaks and other meat and poultry outbreaks that we've seen, is that it doesn't check for microbiological contamination.

You need sampling, particularly in seafood, where you have chemical contaminant problems and you have natural toxins, and I

would agree that we need the development of rapid testing for a lot of these things. For ciguatera, tests on boats would be preferable.

So, those are the kinds of things that you really need to look at in looking at a program.

Mr. MANTON. Miss Longo?

Ms. LONGO. I would just like to make a comment in respects to that question.

It's funny that you asked a question about will the inspections fix the problem. I have spoken to a lot of my chefs and other restaurant colleagues, and the biggest comment coming from the restaurant industry is that they're very fearful of it, but they want it, so they're kind of on this see-saw kind of thing.

The reason they're fearful of it is because they're afraid that it's going to get tied up in the channels, there's going to be a lot of expense passed on to them, and you have to pass it on to the consumer and, in turn, it will cause problems as far as being able to sell it.

On the other hand, they're in favor of it, because they don't want to deal with the liabilities that they are now faced with.

And so, it's kind of a hard situation.

One of the biggest problems that I find, which is something simple, and I thought this is something that could be taken into consideration is, if not anything else, if the restaurant community had the ample opportunity to find out, (a) where the fish came from, and the boat where it came from, and the time that it came in, that maybe if someone got sick, we could trace it back so those waters could be tested a little bit better.

You know, we are all required to keep the tags from our shellfish and things like that. We have no way of knowing where these fish come from, and unfortunately, because the seafood industry has gotten so tough and we can't ward off the guys who want to sell the bogus stuff, you're still getting fish that's got the skins and other things taken off of it. You really don't know, unless you've been trained very well. I try to train my staff, because I've been able to tell whether fish is contaminated using certain tests, like if you buy mahi, whether or not it has ciguatera and things like that, because some of those are pretty outward and visible.

But at least if something simple were started so that the restaurants could see where these products were coming from, maybe we could feel a little bit easier in respects to trying to calm the public down in our restaurants.

Mr. MANTON. Mr. Tollefsen?

Mr. TOLLEFSEN. Yes, I'd just like to make a few general comments.

First of all, the concern about the shellfish, again, is undoubtedly in the area of the end user eating it as a raw product. Most of the problems associated with shellfish go away when it's cooked, and that, by itself, makes shellfish unique in the area in which it's handled and everything else. It requires better education, so people know what's happening, on the end use for a product that's not intended to be cooked. That's a real concern.

Miss DEWAAL. I disagree with that.

Mr. TOLLEFSEN. The second thing, I'd like to just address a comment to Miss Longo, and I think I heard that the real start of all

your problems which I'm sorry that you had, may have been the result of a puncture from fish products that had bacteria on the outside of it. That certainly is an exposure, and it's just a similar exposure to someone stepping on a nail. We don't stop building houses and stop using nails. There's bacteria and contaminants on everything that we deal with, and a puncture into the body is serious stuff.

The exposure to a consumer, as an end-user, is not even significant in the picture here. It does happen in the trade, just like it would for a carpenter. I'd like you to think about that as an analogy. It's not the fish that's a problem. It's the environment that surrounded the outside of the puncture.

The third thing I'd just like to bring up, too, is the need that was also pointed out in terms of education. Now, you can go back and to accept a fish that's filleted or prepared in different form, as a restaurateur, requires education. You can't just do that for meat, and you can't do it for chicken, either. It requires an understanding of your trade and it requires a ability to differentiate between what's given to you, in terms of its wholesomeness and things like this.

So, there is really a real responsibility for a person that's serving a product to a consumer to be educated to the point of knowing what their product is. Now, some things are correct that we cannot really understand. These are the things that those—ciguatera, for instance, is extremely impossible to detect, after it's brought to you. But that's a small percentage of the overall fish that come into this area, and there is a definite need to determine that these fish are coming from certain areas that are likely to have that concern.

That information is available and it can be pursued and it's something which is really very important to continue to pursue, so thank you,

Mr. MANTON. Mr. Gall?

Mr. GALL. I'd like to make a point about HACCP. I believe Miss DeWaal said that HACCP is a quality control type of system, rather than a food safety control system, and I'd like to respectfully disagree with that.

HACCP, by definition, is a process of identifying hazards in food production and putting in effective steps to control those hazards. And so, HACCP really is a food safety control program.

The current voluntary program that exists in this country is designed to control both food safety hazards as well as wholesomeness hazards and economic fraud hazards. This is the voluntary program coordinated by the National Marine Fisheries Service.

I wanted to make that clarification about HACCP and the role that it could play in modifications in the seafood inspection system.

And, I'd also like to make the point that a tremendous amount of effort has gone into developing these systems and HACCP models for seafood products, and it doesn't seem to me to make a lot of sense to make a dramatic change when you consider the progress that's already been made in developing an HACCP system for seafood.

Mr. MANTON. Let me go to the Professor. He hasn't had a turn, and then I'll move to another question, I think.

Mr. KANDURI. Thank you, Mr. Chairman.

Like Ken Gall just pointed out, HACCP has been recognized by the Commissioner of the Foods and Drugs Administration and they have put in a lot of effort in laying out a HACCP plan for seafood and they would like to use this as a model for the other agencies, like USDA, trying to mime the system for meat and poultry inspections.

And the second thing I want to mention is the difficulty. Like I said, the United States imports sixty per cent of the seafood that it consumes, and the implementation of HACCP on imported food could be a significant problem. And there has to be proper regulation regarding the imported seafood, and that has to be addressed in the near future.

Mr. MANTON. Thank you.

I think a last question for the panel, and maybe we can just go down the line. I don't know if you can do it in one minute, but the question is: Should Federal seafood safety programs be consolidated into a single agency, and if so, which agency and why?

[laughter]

Mr. MANTON. You can answer any or all of the questions.

Mr. COLVIN. Thank you, Mr. Chairman.

I don't know that all responsibility for seafood safety needs to be in one agency. I do know that there was legislation proposed a couple of years ago, that thankfully didn't get too far, that would have created a massive overall responsibility for seafood inspection within the U.S. Department of Agriculture, and the States involved in the ISSC had great trepidation about that bill for a lot of reasons, including that umbrella responsibility. There was a perception that that proposal as it was crafted really didn't recognize and provide adequate respect for the history of the States' commitment to shellfish sanitation.

Whether one agency would be better or not, I really don't know. I think that what seems to be evolving now is a continuing role for the FDA in shellfish sanitation. Notwithstanding our concerns, and they're real concerns, about some of the things FDA has done and some communication problems we have, we think we have, through the ISSC, the basis of a good working relationship on shellfish.

With respect to other fisheries inspection, I think I'd probably defer to some of the other experts.

Mr. MANTON. Mr. Gall?

Mr. GALL. I would certainly agree that better coordination of resources and effort is going to be beneficial in the long term. I don't think I'm in a position to comment on which agency or what combination of responsibility would be appropriate at the Federal level, but I also feel that it's very important that we look at targeting the limited resources that we do have to those known potential safety concerns that we can have an impact on.

And, again, that's going to occur through changes in regulations, as well as education and research efforts.

Mr. MANTON. Thank you, Mr. Gall.

Mr. Tollefsen?

Mr. TOLLEFSEN. From the industry's perspective, the less involvement in terms of numbers, the better. It just gets to be a quagmire of complications and I'm not sure if I can comment on which would

be the best organization to handle it, but certainly a common denominator which could answer all the questions concerning these issues of safety would be much appreciated.

Mr. MANTON. Miss DeWaal?

Miss DEWAAL. We have had a variety of positions on this in the past, and basically our position over the last two years has been that whatever agency, between USDA and FDA and the Department of Commerce, has a role in this, needs to have a public health mission as its primary objective, and we have specific concerns about the Department of Commerce in this regard.

And, also, the program needs to be adequately funded. It needs to have adequate resources and adequate authority, and we have concerns about FDA's funding and authority. So, we would ask that any agency that gets it have a public health mission, which FDA does have. We haven't seen FDA's HACCP proposal, because they haven't published it yet, but we're somewhat optimistic.

I do want to clarify—HACCP is used in a variety of other contexts, other than food regulation, but it is a promising new approach to food safety regulation. So, I don't mean to disparage it by saying it's a quality control system, per se. It is a promising new approach, but just having a regulatory HACCP program is not enough, and FDA needs enforcement authority. They need some additional mandates that Congress needs to deliver, to do their job and they need funding.

Mr. MANTON. Miss Longo?

Ms. LONGO. I'm not sure I could tell you exactly which one would be the best for it, either, because I don't have that much information.

But, I might add, interestingly enough, a few years ago, which has now stopped due to the fact that the funding has gone away, that some of even the local health departments would go into some of the fish markets and the restaurants and also take fish samples to make sure that they, as the end user, were also keeping these things properly. And I think that if you start with the government agencies, all the way down to the bottom, as I said, even at health department level, you will find that possibly it could be handled a little better.

As I said, there's probably too many organizations that need to get involved in this, so.

Mr. MANTON. Thank you, Miss Longo.

And, you have the final word, Professor Kanduri.

Mr. KANDURI. Thank you, again.

I would like to sum it up, with my predecessors' speeches, whoever gets the control has to have the regulatory authority and from what I see right now, it's FDA is better prepared than any other agency.

So, I think the Congress is probably going to look into that aspect and their mission is, again, to assure wholesome and safe food, not just seafood, all foods to the consumer.

Thank you.

Mr. MANTON. Thank you, Professor, and thanks to the panel for being with us today. Your comments are going to be part of the permanent record, and they're very informative and will be very constructive in helping us to legislate in this area.

Thanks, again.

The meeting is concluded.

[Whereupon, at 12:46 p.m., the Subcommittee was adjourned; and the following was submitted for the record:]

TESTIMONY OF
DR. VAUGHN C. ANTHONY
CONSERVATION AND UTILIZATION DIVISION
NORTHEAST REGION
NATIONAL MARINE FISHERIES SERVICE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
U.S. DEPARTMENT OF COMMERCE

BEFORE THE

SUBCOMMITTEE ON FISHERIES MANAGEMENT
COMMITTEE ON MERCHANT MARINE AND FISHERIES
U.S. HOUSE OF REPRESENTATIVES
BROOKLYN, NEW YORK

SEPTEMBER 10, 1993

Mr. Chairman and Members of the Subcommittee:

I am Vaughn C. Anthony, Chief of the Conservation and Utilization Division of the National Marine Fisheries Service's Regional Science Center in Woods Hole, Massachusetts. I appreciate the opportunity to discuss the status of marine fisheries resources for the New England and mid-Atlantic regions.

BACKGROUND HISTORY

Finfish and squid resources off the northeastern coast of the United States have experienced significant changes in abundance due to fishing during the past 30 years. While some stocks of fish are underfished, such as mackerel, butterfish, skates, dogfish and squids, groundfish abundance has fallen to all time record lows. Prior to 1960, the fishery resources in this area were fished almost exclusively by the United States, except for scallops which were also fished by Canada. Distant water fleets expanded their fisheries in the 1960's into this area and

increased the catch of most species to record levels. As many as 13 nations fished on these resources up to 1976. Figure 1 indicates the landings of principal groundfish off the New England and mid-Atlantic coasts from 1960 to 1992 by U.S. fishermen and by fishermen from all countries. These species are Atlantic cod, haddock, yellowtail flounder, redfish, pollock, silver and red hake, winter flounder, American plaice, witch flounder, white hake, and summer flounder. In 1965, about 780,000 metric tons of groundfish were harvested including 323,000 metric tons of silver hake, 155,000 metric tons of haddock and 96,000 metric tons of red hake. This total of 574,000 metric tons for these species compares to a catch today by U.S. fishermen of only 24,000 metric tons. As the stocks of fish declined during the late 1960's, the foreign fleets moved from one stock to another, overfishing haddock, silver hake, red hake, herring and mackerel. The International Commission for Northwest Atlantic Fisheries (ICNAF), the international body for managing such fisheries, had been in existence since the mid-1950's and attempted to control fishing effort with mesh sizes and closed areas. These indirect management controls, however, were no match for the heavy fishing until catch quotas were introduced along with national allocations of these quotas in 1973.

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CATCH QUOTAS

Twenty-three stocks came under catch quota control in 1973, and 54 catch quotas were put into place in 1974. Landings rapidly

declined as the catch quotas were reduced while the catches by U.S. fishermen increased (Figure 1). The Magnuson Fishery Conservation and Management Act (MFCMA) began in 1977 and excluded fishing by foreign nationals except for Canada. The pollock catch is shared with Canada as this stock migrates back and forth across national boundaries and cod and haddock are caught by Canada on the northeast peak of Georges Bank. Catch quotas continued under the management of the New England Fisheries Management Council until 1982. Figure 1 indicates the increase in landings by the United States after 1973 to about 200,000 metric tons in 1980-1983. The groundfish stocks also declined. The landings in 1992 by U.S. fishermen of the major groundfish species were about 80,000 metric tons, a 30 percent reduction from the level in 1990.

These events made it very clear that the region off the northeastern coast is one of the most productive fishing areas in the world and with rebuilding of the resource and proper management, as much as 400,000 metric tons of the major groundfish species can be harvested annually (if the stocks do not compete with each other). Allowing for some biological interactions among the species, 80 percent of the total maximum sustainable yield (MSY) is still 320,000 metric tons or four times the landings in 1992. Canada has traditionally caught 25 percent of these resources, and probably would continue to catch substantial amounts of cod, haddock and pollock if the stocks

were rebuilt. We could, however, increase our recent catch level of less than 100,000 tons by two to three times without overfishing the stocks once they are rebuilt.

FISHING EFFORT

Figure 2 indicates the change in days fished by the otter trawl fleet from 1976 to 1990. Effort increased on the traditional groundfish species with the passage of the MFCMA. The number of days fished by otter trawlers increased 81 percent overall from 1976 to the 1984-87 period before decreasing by 15 percent. The days fished increased almost 100 percent in the Gulf of Maine, 85 percent on Georges Bank, and 82 percent in southern New England (Figure 2). The average size of the fishing vessels also greatly increased. New electronic equipment was purchased and the fishing power of these large vessels increased by a considerable amount. With this large increase in fishing effort, catches increased as well (Figure 3). In the Gulf of Maine, bottom trawl landings increased by 41 percent from 1976 to 1983. On Georges Bank and in southern New England, landings increase by 83 percent (1976 to 1982) and 94 percent (1976 to 1984), respectively. Many species became heavily fished in just a few years. Catches doubled or more than doubled in the Gulf of Maine for American plaice (dabs), gray sole (witch flounder), winter flounder, white hake, cusk, Atlantic wolffish, and haddock. Large numbers of smaller fish were also discarded. Landings in all areas sharply declined after the 1982-1984 period.

DECLINES IN ABUNDANCE

Exploitation rates increased so greatly during this period of time that 40 to 50 percent of the fishable populations of some groundfish were landed annually. Such large increases in exploitation rates caused the population abundance of many groundfish species to decline sharply. As a result, catches started to decrease in the early 1980's and they continue to decline today for many species.

Figure 4 indicates the change in abundance as indicated by the catch per unit of effort from the otter trawl fishery. Abundance has generally declined in all areas since the early 1980's. The situation for southern New England has differed from the other two areas because of relatively high abundance of butterfish and squid. Abundance increased in 1989 and 1990 in the Gulf of Maine - Georges Bank area, due mainly to improved recruitment for cod, but has since declined dramatically. The increase in southern New England began in 1988 due to increased abundance of butterfish, squid, silver hake, and yellowtail flounder.

Figure 5 shows two indices of abundance for the principal groundfish species. These were derived from commercial catch per day information from the otter trawl fishery and from the autumn bottom trawl research survey conducted by the Northeast Fisheries Science Center (NEFSC). The research survey began in 1963. Indices for the time series indicate a great reduction in

abundance over a 25-year period. The high levels in the early 1960's were a result of underfishing and an accumulation of old-age, slow growing stocks of fish such as redfish, hakes and two very good year classes of haddock. These high catches could not be sustained and the stocks declined very rapidly until 1974, when restrictions on fishing under ICNAF and good year classes of cod and haddock produced a sharp increase in abundance. The abundance declined during the 1980's but increased in 1989 and 1990 due to good year classes of cod and a good year class of yellowtail flounder. The 1992 indices are time series lows for both the survey index and catch per unit of effort.

STATUS OF COD, YELLOWTAIL FLOUNDER AND HADDOCK

Examples of the status of groundfish resources are shown in Figures 6 through 11 for Georges Bank cod, southern New England yellowtail flounder and Georges Bank haddock. Figure 6 shows indices of abundance for Georges Bank cod and of the number of age two recruits to the population as indicated by the autumn bottom trawl research survey. The height of each bar indicates the relative number of age two cod that are entering the fishery in the year indicated. In 1973, for example, recruitment was very good. The 1977, 1981 and 1982, recruitment was also fairly good. The recruitment in 1987 and 1990 was better than average. The abundance index indicates the overall population abundance including these recruits. During the 1960's when fishing was very heavy by foreign nationals, the abundance index was quite

low. It increased sharply during the 1970's due to the good recruitment in 1973 and 1977. The abundance declined during the 1980's due to heavy fishing and the lack of very strong recruitment for the stock. The indices of abundance for 1991 and 1992 are extremely low, consistent with sharp declines in recent catches.

Figure 7 indicates the reason for the decline in abundance of Georges Bank cod. The exploitation rate increased from 0.28 in 1978 to 0.53 in 1992. This is a level of fishing that is twice as high as the target set by the New England Fishery Management Council. The MSY from this resource is achieved when the spawning stock biomass is about 105,000 metric tons in size which would produce an annual catch of about 35,000 metric tons. In 1993, the spawning stock biomass was less than 40,000 metric tons, and declining rapidly.

Figure 8 shows the change in abundance and landings for southern New England yellowtail flounder. The abundance index is calculated from the autumn bottom trawl research survey conducted by the Northeast Fisheries Science Center since 1963. During the decade of the 1960's, the abundance of yellowtail flounder was very high and supported annual catches of about 28,000 metric tons. The maximum sustainable yield for this stock is only 23,000 metric tons, which suggests that the abundance during the 1960's was at a very high level indeed. This stock dramatically

declined during the 1970's, and 1980's with a brief increase in abundance in 1982 and 1983, and then again in 1989. Fish born in 1980 and 1981 (fish of the 1980 and 1981 year classes) were responsible for the increase in abundance during 1982 and 1983 and the good year class of 1987 produced significant numbers of age two recruits during 1989. These recruits were all rapidly fished out (Figure 9). Exploitation rate for the stock has been very high during the 1980's and in 1992 stood at a level of 0.74. This is two times the target level of 0.35 as set by the New England Fishery Management Council. The spawning stock biomass of southern New England yellowtail flounder is currently only at about a level of 3,000 metric tons and the maximum catch for this stock is only achieved when the spawning stock biomass reaches around 48,000 metric tons. This stock of fish is also at the southern end of its range in the north Atlantic and tends to do poorly under warm water conditions. The productivity and success of this stock, therefore, is not only a function of managing the fishing mortality and the size of the spawning stock, but of achieving the right conditions environmentally as well.

Figure 10 displays the indices of abundance for Georges Bank haddock along with landings. The very strong recruitment levels in 1964 and 1965 are very obvious in this figure. This recruitment attracted the Soviet Union to fish on this stock, and in 1964 they caught 80,000 metric tons along with the 58,000 metric tons by the United States and 18,000 metric tons by

Canada, for a grand total of 156,000 metric tons. In 1965, 122,000 metric tons were taken from this resource and the stock declined very rapidly. This stock had been producing catches at its MSY of about 47,000 metric tons annually since 1930. The only good year class to come along in this fishery since 1964 was in 1977 when the good year class of 1975 appeared which was able to spawn in 1978 to produce the second best recruitment over the 25-year period. These two year classes were quickly fished out. The opportunity for rebuilding this resource was lost, and the stock has declined to very low levels since.

Figure 11 indicates the changes in the spawning stock biomass and fishing mortality rate for Georges Bank haddock. The current level of exploitation rate is about 0.37, slightly above the target as set by the New England Fishery Management Council at 0.30. Note that the exploitation rate in 1976, 1977 and 1978 was less than 0.1 which allowed the 1975 year class to live long enough to spawn once in 1978. The abundance of this resource, as indicated here by the spawning stock biomass however, is at a very low level. In 1992, it is estimated that only 13,000 metric tons of spawning stock still exist for this stock and a spawning stock level of 130,000 metric tons is the desired level for providing the MSY of just under 50,000 metric tons annually. The spawning stock biomass, therefore, would have to increase by a factor of 10 to achieve the annual catches that were routinely taken during the 1930's, 1940's and 1950's.

Figure 12 indicates the recent stock condition and exploitation rates for summer flounder. Recruitment failure and overfishing contributed to declining catches and stock sizes during the 1980's. Improved recruitment, combined with dramatic reductions in exploitation rate, resulting from the Mid-Atlantic Council's Summer Flounder Fishery Management Plan, will result in improved spawning stock biomass and landings during the next few years.

REDUCTIONS IN FISHING MORTALITY

The three stocks of cod, yellowtail flounder and haddock reviewed in Figures 6 through 11 are only examples of the overfishing problem that exists off New England. For similar information on other fish and shellfish stocks in this area, read the status of the stocks report published by the NEFSC in September each year¹.

Table 1 indicated the exploitation rate during 1990 for cod, haddock and yellowtail flounder off the northeastern United States which are indicative of the overfishing groundfish problems. The targets for management are compared with the 1990 levels of fishing mortality which indicate that considerable reductions across the board have to be achieved in order for these targets to be reached. For Gulf of Maine cod, for example, a 50 percent reduction is required. Exploitation rates need to be reduced substantially for all stocks, although the percent reductions required differ by stocks.

STOCK REBUILDING

There is no guarantee that, as the fishing mortality rates reach the target level, the stocks will rebuild at a given rate in the near future. The Georges Bank haddock situation, in particular, suggests that because the stock is so low even though the recent levels of fishing mortality have not been much above the target level, additional reductions in fishing mortality below the target level might be required to rebuild the stock at a reasonable rate. There is no reason to believe that the Fishery Management Councils would desire to rebuild the stocks to those levels that would provide the maximum sustainable yield either. The decisions on the final level for rebuilding would probably be a function of economics (marketing) and social decisions (allocations) made by the Management Councils. In any event, Table 2 indicates the 1992 catches and the maximum sustainable yields or catches that could be obtained from the 13 species that currently are being regulated by the Northeast Multispecies Fishery Management Plan. Along with the catch information in Table 2 are the calculated 1993 levels of spawning stock biomass and the levels of spawning stock biomass that would be required to provide the MSY. The 1992 catch numbers are those for the United States and Canada combined and for both commercial and recreational fishing. Of the total 1992 catch (142,000 metric tons), 82,000 metric tons was taken by the United States. The present condition of the spawning stocks suggests that recruitment and therefore catches will not increase in the near

future unless exploitation rates decrease dramatically and spawning stocks rebuild.

This table does indicate the potential for harvesting as much as 400,000 metric tons of groundfish off the northeastern United States if the stocks were rebuilt. Much of this catch (140,000 metric tons) would come from silver hake (whiting) and red hake. The catch for haddock, however, could be dramatically increased as well as the catch for yellowtail flounder. Catches of cod at the MSY level would actually be less than catches in the late 1980's because good year classes of cod passed through the fishery then, and were heavily harvested. These cod landings will continue to decline under the present scenario but they could be taken every year at the level of 45,000 metric tons if the stocks were rebuilt. In 1992, cod accounted for 53 percent of the total catch of the regulated groundfish species. The potential for increased catches is considerable which can only be attained by increasing the spawning stock biomass to reasonable levels which would then produce fair to good recruitment on an annual basis. The total spawning stock biomass in 1993 for the 13 regulated groundfish species would have to increase by a factor of 2.5 to reach nearly one million metric tons before this MSY can be taken for all species. The benefits of stock rebuilding are obvious. The alternative of letting the fishery continue as it is suggests that the abundance and catches will

continue to decline to newer and lower levels. The more reduced a spawning stock becomes, the longer it takes for stock recovery.

UNDERUTILIZED SPECIES

Not all fishery resources off the Northeast Coast of the USA are overfished. Some are underfished. Table 3 lists six such species which are currently very abundant. The combined MSY is about 300,000 metric tons, but because abundance is so great at the present time, a catch three times this amount could be taken in the short term. Harvests of these six stocks totalled only 100,000 metric tons in 1992.

The most extreme example of an underutilized stock is the Atlantic mackerel (Figure 13). This stock was overfished by foreign fleets during the early 1970's and stock biomass declined to low levels of about 775,000 metric tons. With the passage of the MFCMA, fishing was greatly reduced on this stock and it gradually recovered. It took seven years before significant recovery began, however. From 1983 to the present, we have seen a tremendous increase in abundance of mackerel to quantities not seen before. Catches have only averaged 60,000 metric tons over the period 1983-1992 compared to levels of 400,000 metric tons in 1973. The total catch in 1992 was only 38,000 metric tons, 12,000 of which was caught by U.S. fishermen.

Figure 14 indicates another example of sharp increases in abundance in recent years. These are seven species of skates and spiny dogfish. The spiny dogfish, in particular, is estimated to have reached over one million metric tons in abundance in 1990. This compares with the long term average estimate of about 300,000 metric tons from 1968-1989. The abundance of skates was fairly low during the 1960's and 1970's in response to significant exploitation by distant water fleets. From 1979 through 1988, biomass estimates for skates increased significantly, reaching a peak in 1988. Increases in abundance of skates and dogfish, coupled with a decrease in abundance of many demersal species, have resulted in a change in composition of NEFSC bottom trawl survey catches on Georges Bank from roughly 25 percent dogfish and skates in 1963 (by weight) to nearly 75 percent in recent years.

Landings of these species have significantly increased but only to levels of about 25,000 metric tons. At the present levels of abundance, nearly ten times that amount could be harvested and under normal abundance levels, catches greater than three times the present level could be taken (85,000 metric tons).

Thank you Mr. Chairman, this completes my testimony. I would be pleased to answer questions.

¹ To obtain a copy of the latest status of the stock report, write to: Information Services Section, Northeast Fisheries Science Center, 166 Water Street, Woods Hole, MA 02543-1097 and ask for Technical Memorandum NMFS-F/NEC-86 "Status of Fishery Resources Off the Northeastern United States for 1992."

EXPLOITATION RATES NORTHEAST GROUND FISH

STOCK	EXPLOITATION RATE	COUNCIL TARGET
COD - GB	0.53	0.28
COD - GM	0.63	0.30
YTF - GB	0.51	0.40
YTF - SNE	0.74	0.35
HAD - GB	0.37	0.30
AVERAGE	0.56	0.33

LANDINGS IN 1992 MSY, AND SPAWNING STOCK BIOMASS FOR NE GROUNDFISH STOCKS

STOCK	1992 LANDINGS	MSY	1993 SSB	SSB FOR MSY
COD - GM	13.5	10	10	30
COD - GB	29.4	35	35	105
HAD - GM	0.3	5	2	15
HAD - GB	7.0	47	15	130
POLLOCK	42.0	54	100	120
REDFISH	0.9	14	25	100
YTF - GB	1.2	16	2	25
YTF - SNE	2.6	23	3	48
OTHERS	45.0	191	188	381
TOTAL	141.9	395	380	954

Table 2

COMMERCIAL and RECREATIONAL (USA and CANADA)

NORTHEAST FISHERY RESOURCES UNDEREXPLOITED STOCKS

STOCK	MSY	CATCH 1992	CURRENT POTENTIAL CATCH
MACKEREL	134	38	600
DOGFISH	60	11	200
SKATES	25	12	25
BUTTERFISH	16	3	20
LOLIGO SQUID	36	18	36
ILLEX SQUID	30	18	30
TOTAL	301	100	911

Table 3

LANDINGS OF PRINCIPAL GROUND FISH NORTHEAST USA

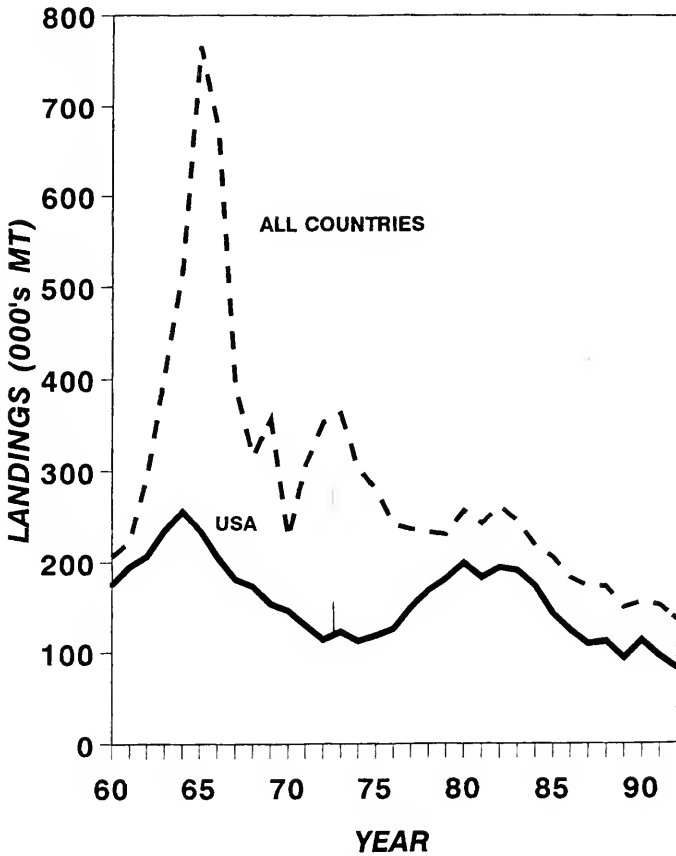


Figure 1

OTTER TRAWL FISHING EFFORT

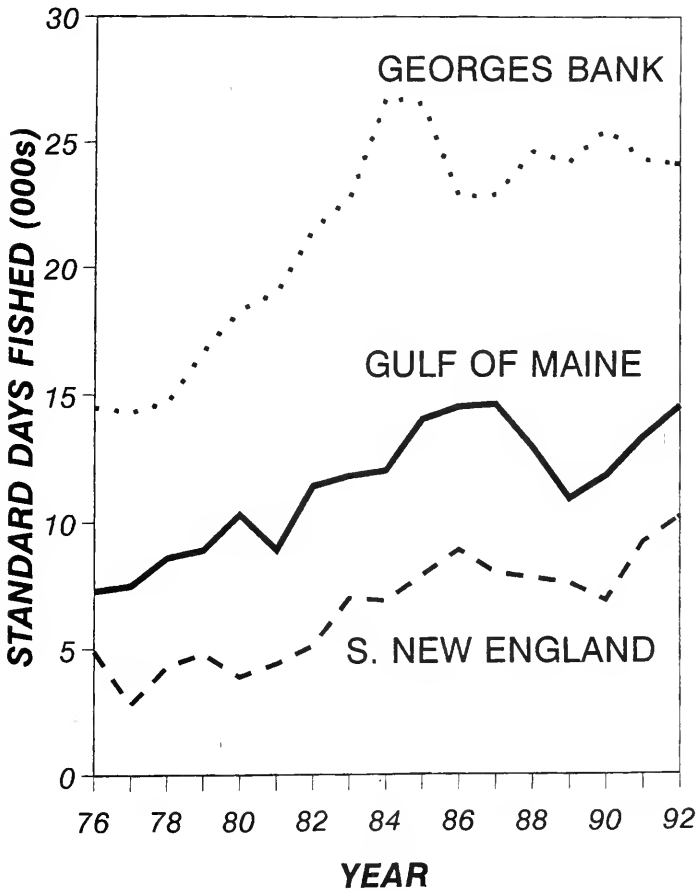


Figure 2

TRAWL FISHERY LANDINGS

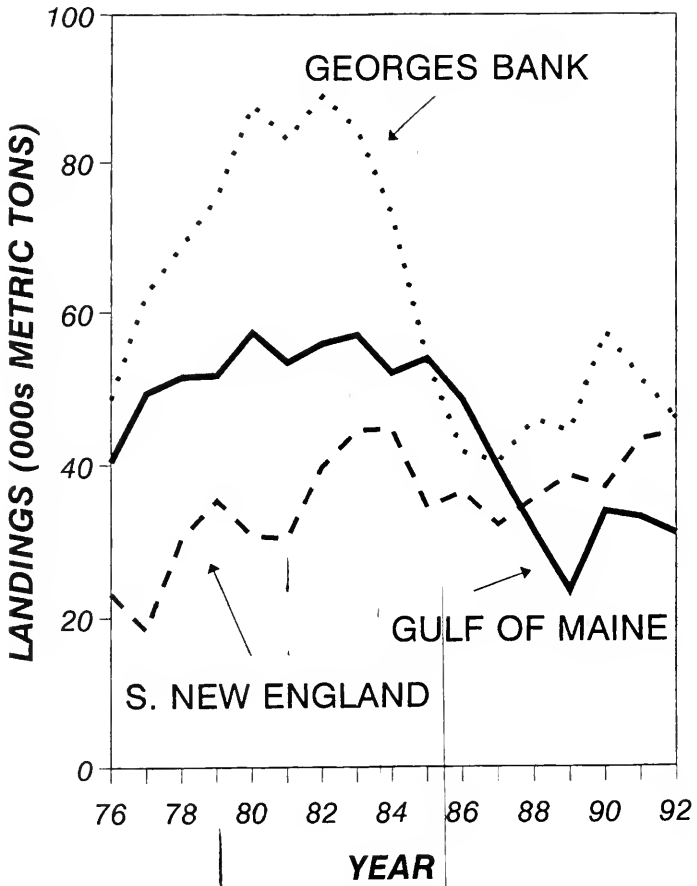


Figure 3

OTTER TRAWL FISHERY CPUE

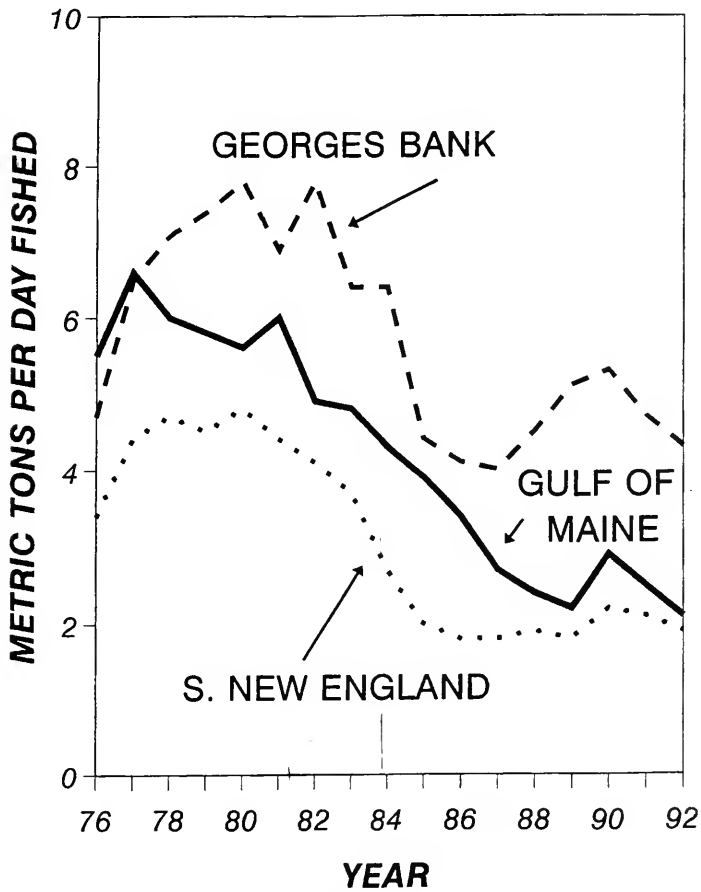


Figure 4

NORTHEAST GROUND FISH RESOURCES ABUNDANCE INDICES

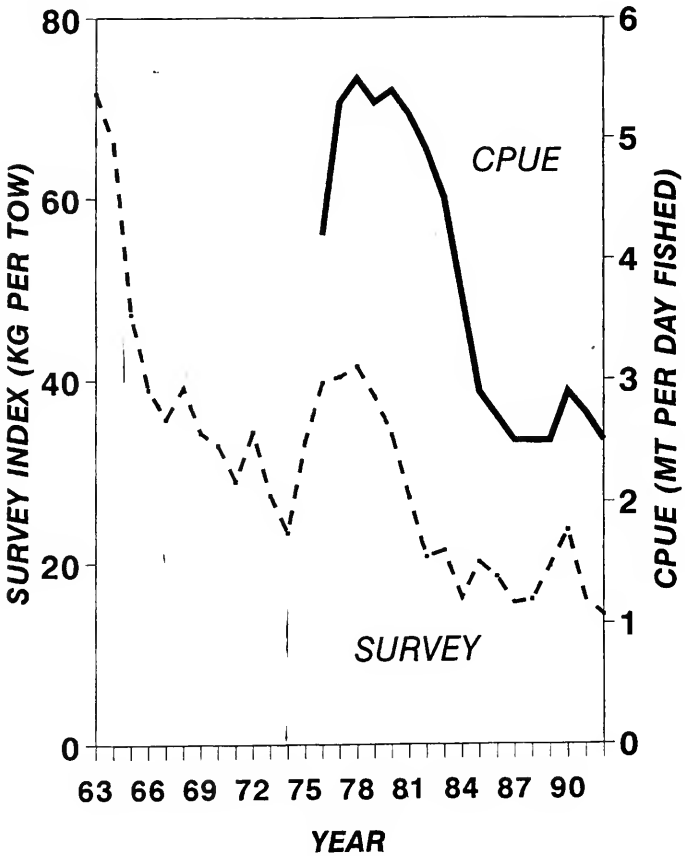


Figure 5

GEORGES BANK COD

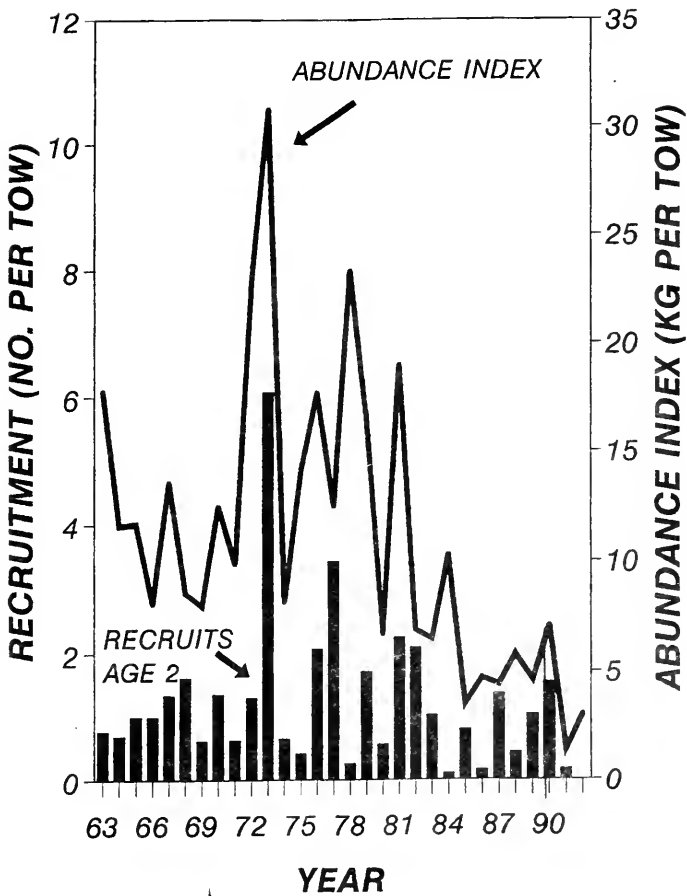
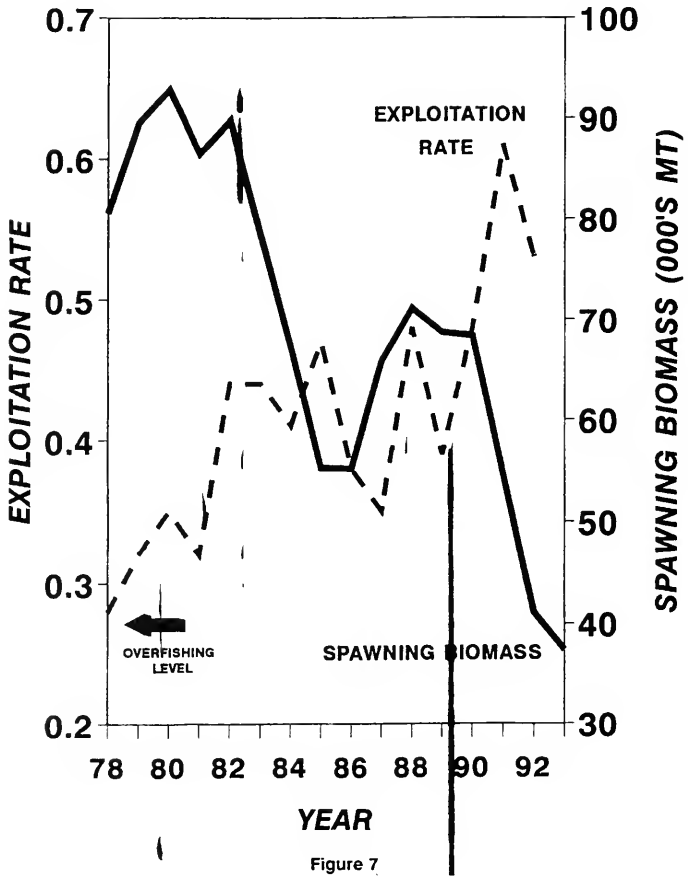


Figure 6

COD - GEORGES BANK SPAWNING BIOMASS AND F



YELLOWTAIL FLOUNDER
WEST OF 69° W – SOUTHERN NEW ENGLAND

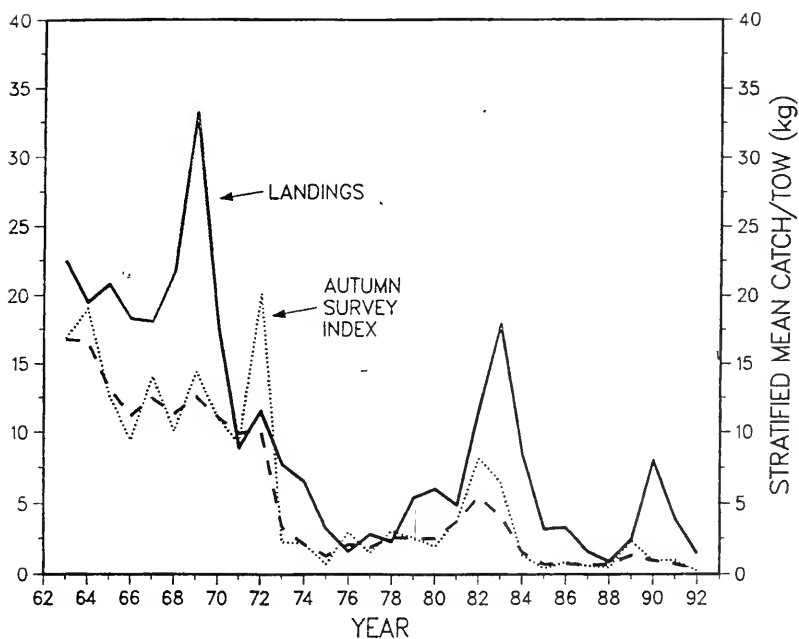


Figure 8

S. NEW ENGLAND YELLOWTAIL SPAWNING BIOMASS & EXPLOITATION

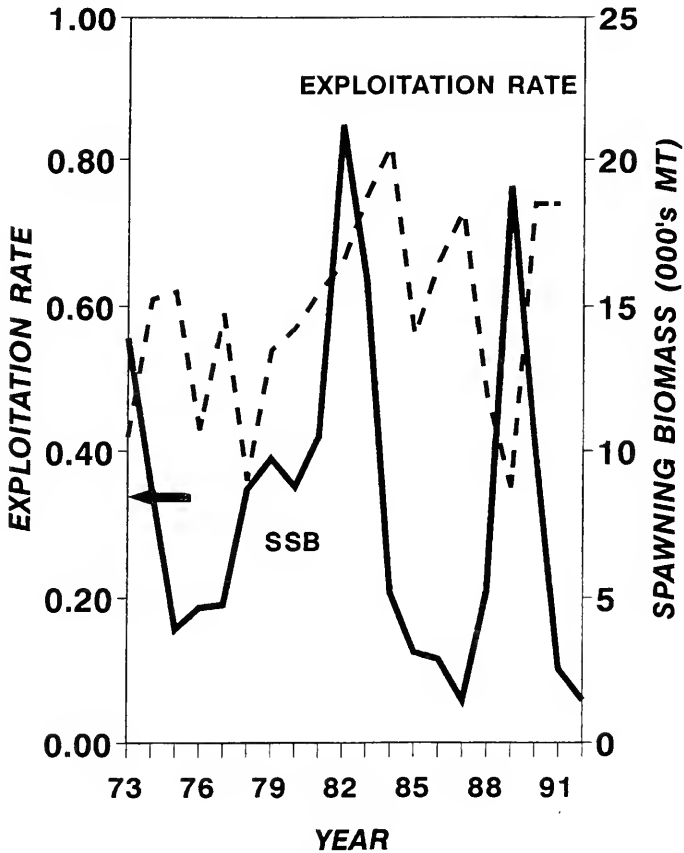


Figure 9

HADDOCK: GEORGES BANK

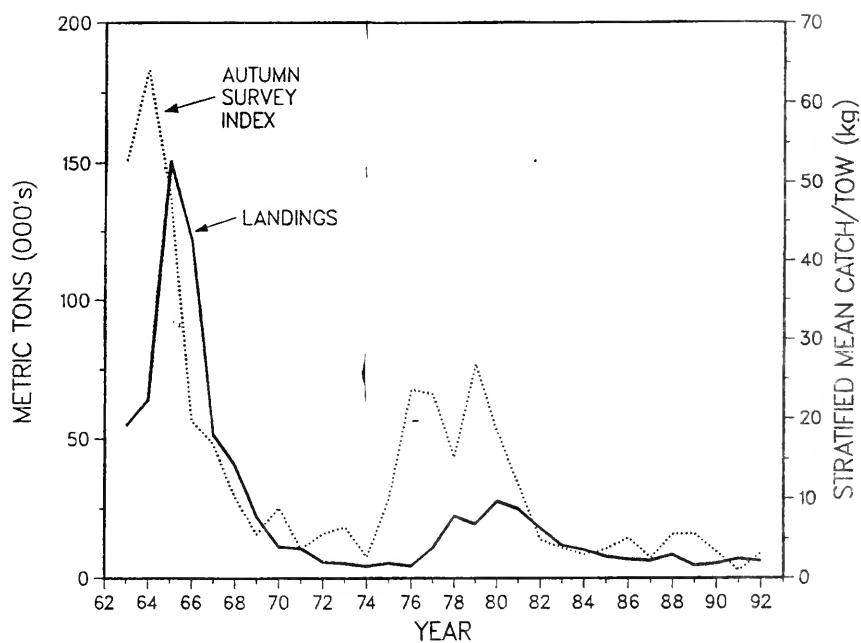


Figure 10

GEORGES BANK HADDOCK SPAWNING BIOMASS & EXPLOITATION

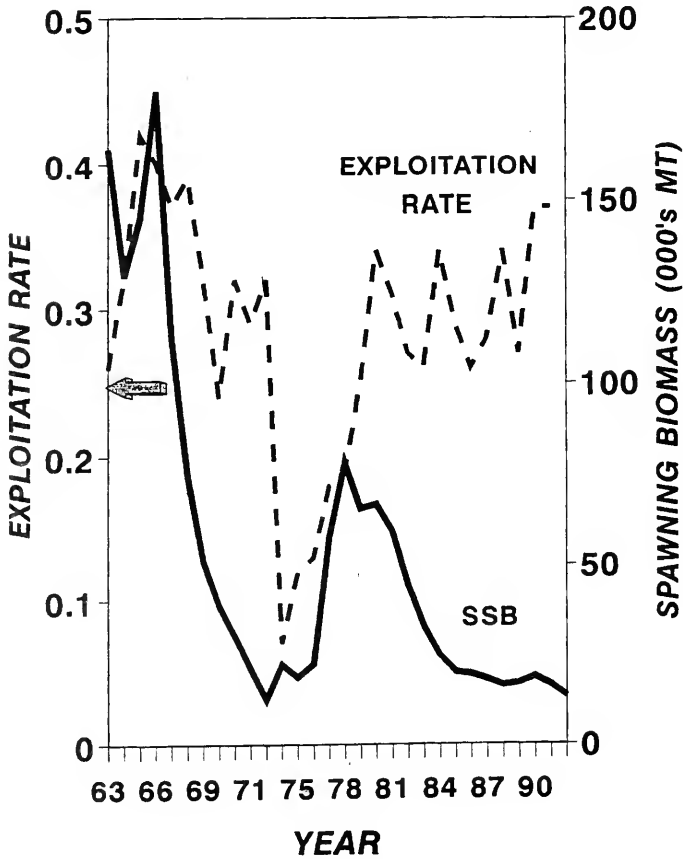


Figure 11

SUMMER FLOUNDER SPAWNING BIOMASS & EXPLOITATION

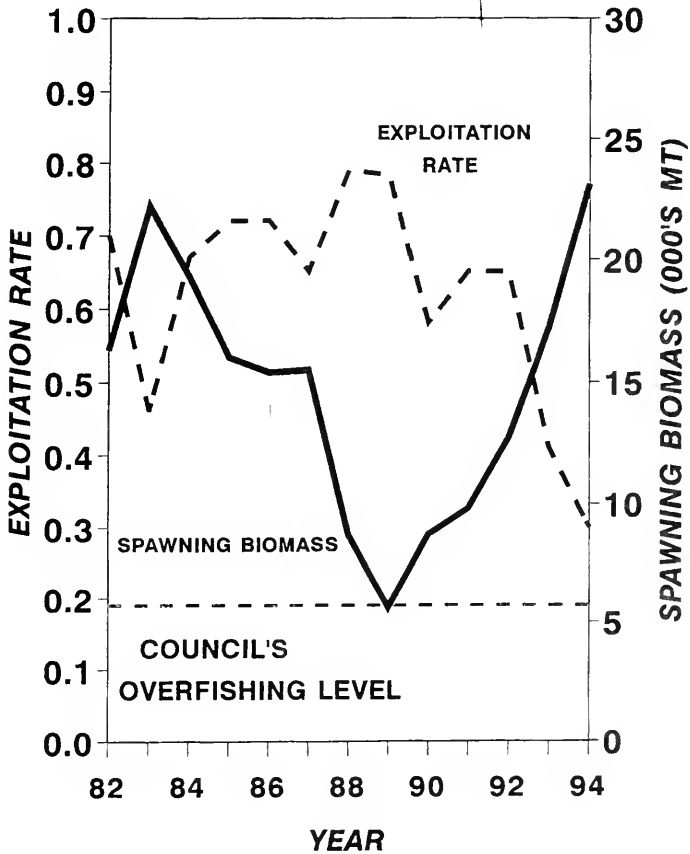


Figure 12

ATLANTIC MACKEREL

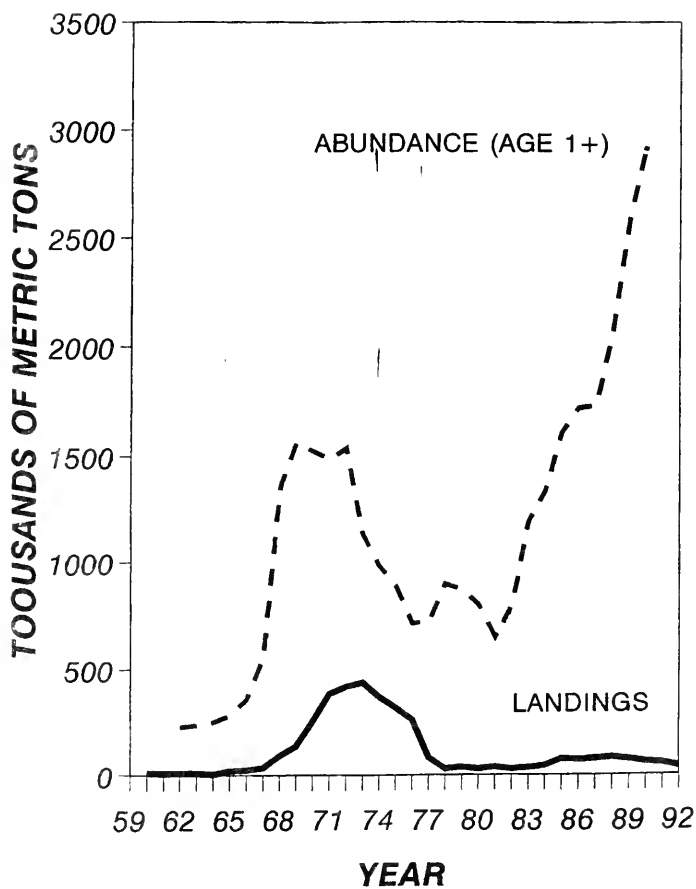


Figure 13

LANDINGS AND ABUNDANCE SKATES AND SPINY DOGFISH, 1960-1991

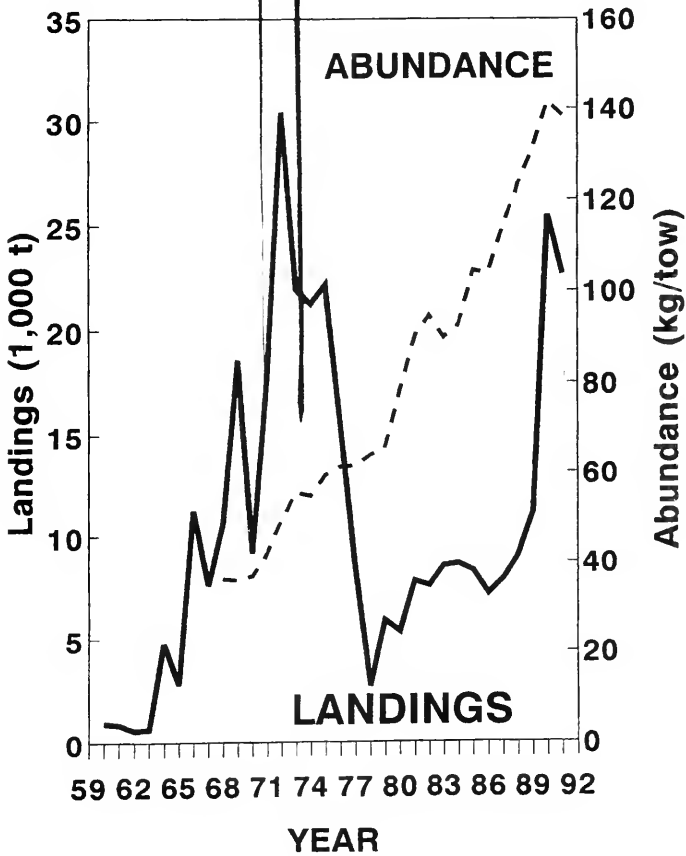


Figure 14

Mr. Chairman, Members of the Committee:

My name is Anthony DiLernia and I am a Professor of Marine Education here at Kingsborough Community College. In addition, I am a member of the Mid-Atlantic Fishery Management Council, Executive Director of the Long Island Commercial Passenger Fishing Vessel Association, President of the Freeport-Nassau Fishermen's Alliance, a member of the executive board of the New York Seafood Council and for the past fifteen years, I have been employed part-time as a captain for the Blue Fin Fleet in Freeport, New York, taking members of the public on daily fishing trips into the EEZ.

These positions have enabled me the ability to view fisheries management from three different perspectives as an academic, as a member of industry and as a fishery manager. In fact I see my role as a Mid-Atlantic Council member primarily as one responsible for facilitating communications between the scientific and management communities and the recreational and commercial industries.

My comments today are my own but have been endorsed by the members of the Freeport-Nassau Fishermen's Alliance.

First I would like to point out that man has a moral obligation to manage fisheries. We are taught this early on. In fact, chapter one, verse twenty-six of the Book of Genesis states, "Let us make man in our image, after our likeness, and let man have dominion over the fish of the sea and over the fowl of the air."

As a result of this moral obligation a social contract exists between government and the people to manage fisheries. In recent times in a frenzied attempt to satisfy this social contract we have reduced fisheries management to cold numbers and statistics and have neglected the human element. What we need is to include more social scientists in the fishery management process. We must consider the human element more closely when making management decisions.

Second, I would like to recommend that a greater attempt be made to include our immigrant and minority populations in the recreational data collection process. I am not confident that their attitudes or values are properly represented in the management process.

Third, the Act should recognize that in some fisheries, the division between recreational fishing and subsistence fishing is not as clear cut as many would like. The Act should, therefore, require that fisheries containing a recreational component be carefully analyzed to determine which portion of the recreational fishery is in fact subsistence fishing.

Fourth, it is likely that as Fishery Management plans and amendments are developed the operators of passenger vessels will be issued operators' permits. The Act should recognize that these permits could carry revocable privileges which would benefit the public and allow the operators flexibility in their operations.

Finally, I would like to recommend that Section 302 of the Act be amended to permit the inclusion of New York State in both the New England and Mid-Atlantic Fishery Management Councils.

Fishermen operating from the ports of Montauk, Shinnecock, Greeport and the North Shore of Long Island operate in a mode identical to those fishermen from southern New England. The fishermen from these New York ports usually find themselves fishing alongside fishermen from Connecticut, Rhode Island and Massachusetts. Georges Banks which is east of Montauk and southeast of the traditional New England ports is common ground for vessels from New York as well as the New England states. Fishermen on the east end of Long Island often find themselves following the proceedings of the New England , Fishery Management Council more closely than the Mid-Atlantic Fishery Management Council because often the actions of the New England Council have a greater effect on the fishermen from the east end of Long Island.

Fishermen operating from the south shore ports of Shinnecock, Fire Island, Freeport, Point Lookout and Brooklyn usually fish in a fashion more closely aligned with the traditional Mid-Atlantic fishermen. The classic example being the mixed-trawl fishery which is prosecuted in the Mid-Atlantic region.

It is clear then that New York is a transition state between the New England and Mid-Atlantic regions much like North Carolina is a transition state between the South Atlantic and Mid-Atlantic regions and Florida a transition state between the South Atlantic and Gulf regions. Florida is presently represented on both the South Atlantic and Gulf Councils and North Carolina is supported by many including

the Mid-Atlantic Council in its desire to be represented in both the Mid-Atlantic and South Atlantic Councils.

It is therefore my opinion that the fishermen of New York would be best served if New York were allowed seats in both Councils.

Thank you for your time and attention. I would be happy to answer any questions you may have.

TESTIMONY OF JAMES D. O'MALLEY
 EAST COAST FISHERIES FOUNDATION
 MAGNUSON REAUTHORIZATION HEARING SEPTEMBER 10, 1993
 KINGSBOROUGH COMMUNITY COLLEGE, BROOKLYN NEW YORK

Thank you, Mr. Chairman. The fishermen, processors and dealers of the East Coast Fisheries Foundation welcome you and the other members and thank you for holding this hearing in the midst of their greatest marketplace.

We believe that the Magnuson Act is fundamentally sound, and requires only minor adjustments at this time. We agree that there are substantial issues, such as Individual Transferable Quotas, the extraction of economic rent, and conflict of interest problems which need to be addressed. But the opinions of many users, regulators, and other interested parties are changing rapidly right now, and dialogue should precede decision in these most important matters. For example, most environmental groups were solid supporters of ITQ's until fairly recently, and now they are calling for a suspension of that management regime until we know more about the results of privatizing this country's marine resources. (See Appendix A.)

Conflict of interest is another issue which deserves debate. When Magnuson was first being debated, conflict of interest was viewed in an entirely different light. At that time, the concern was that certain individuals or groups would not give the resource enough protection, and that the fleet would plunder the resource. At worst, conflict of interest was viewed as a user-group issue, where commercial interests might treat recreational users unfairly. With the question of property rights and ITQ's, however, this has changed dramatically. Council members can now literally vote themselves tens of millions of dollars. This was not even envisioned a decade ago, and the issue needs the most open and thoughtful discussion possible.

On the question of the extraction of economic rent, it is perhaps useful to forget about fish for a moment. Just think about money. The revenues from the fisheries can go to several places. They can go to individual entrepreneurs, crewmembers and local communities. They can go into the federal treasury, if you are so inclined. Or they can be converted to corporate dividends with the assignment of property rights. Each choice necessarily excludes the others, dollar for dollar. Thus, it is very much a social, economic and political decision--where should the money go, who will use it most productively, wisely, and equitably?

I look forward to participating in these discussions, and working with your staff, on behalf of fishermen, processors, coastal communities, the resource and the nation.

There are, however, some particular points which can be addressed during this reauthorization. I believe that certain changes will make the Magnuson Act work better.

1. I agree that there should be representation for North Carolina on the Mid-Atlantic Council, and that New York should have a seat in New England. For all the same reasons, there ought to be a seat on the Mid-Atlantic Council dedicated to interests in Rhode Island and Connecticut. Like the others, those states have enormous interests in the fisheries regulated by a Council on which they have no voice or vote.
2. There should also be some thought given to Ad Hoc Councils to govern fisheries with vast EEZ ranges and especially international concerns. That discussion is taking place right now, so I will simply express support for that idea.
3. The thirty-day statute of limitation to file a lawsuit on a Fishery Management Plan should be eliminated altogether. First of all, it truncates the co-operative process of industry, Council and government. People have to file suits immediately, just to preserve their rights to judicial remedy. But with litigation in place, open discussion and compromise is replaced by stonewalling, Freedom of Information requests, and legal strategies for discovery. Litigation should be the last resort, when persuasion and debate have failed. Furthermore, many FMP's now include "framework" provisions that allow rapid and productive action by the Agency, should the need arise. But with the FMP in place, there is no legal remedy for an action taken under a framework measure. And legal action, of course, costs a lot of money.

4. Another point has to do with process. The Agency should be required to inform the public of the status of any pending FMP or Emergency Action. It is impossible right now to find out what recommendation has been sent to Washington, or if a plan has been forwarded to OMB or the Secretary. As a result, fishery management is carried out by the principles of secrecy and surprise, as we all found out in the June Emergency Action on Georges Bank. That secrecy is a terrible repudiation of democracy, public participation, and Magnuson itself. Closely allied with that is an important issue of responsibility. Agency personnel should be required to identify themselves when they comment on, or make changes in proposed regulations, if only by initialing their work. Anonymity is a great refuge for malice and incompetence, as we found out in the great "Drivel" fiasco.

5. No data reporting system devised by the Agency should have a "no-action" requirement. It is pure harassment. Many of my members have given up certain fisheries altogether, surrendered their permits, rather than fill out weekly or monthly logs on a fish that they haven't seen in eight months. They won't risk the penalties. In fact, I make this blunt accusation, that the Agency has required these reports for exactly the purpose of driving commercial users out of certain fisheries--swordfish is one example, fluke is another.

6. Commercial permits should be required for the sale of any fish caught in the EEZ, regardless of whether or not there is a management plan in place. It is only common sense that financial reward is in conflict with, and excludes, a recreational intent or ethic. People can say "That's enough fun for today." How many will say, "That's enough money for today?"

7. Appointed members of the Councils should be able to name alternates, just as the ex officio members do. They are on the Councils because their expertise is valued, and they certainly have the expertise to select someone who can carry their message when they are unable to.

8. The requirement for a unanimous vote to compel the Secretary of Commerce to take emergency action should be recognized for the force that it is, because the NMFS representative always votes against the motion in order to preserve the Secretary's option to take no action. Either delete the provision entirely, or make the Agency unable to vote on Emergency Action.

9. Fishermen who make agreements to voluntarily restrict their catches should be exempt from any anti-trust penalties. This will undoubtedly require more than just Magnuson changes, but should be considered. Right now, volume frequently is the only way to make up for low prices. Fishermen know that if they only could avoid flooding the market with a readily-available species, they would be better off, and the resource would be as well. I know that this is a precarious area, and the consumer's rights must be protected as well. But I wonder if the occasional cheap fish during times of glut isn't more than offset by sky-rocketing prices when that same fish is scarce--because it was fished so heavily.

Finally, in the matter of seafood safety, I defer to the expertise of the National Fisheries Institute. But all of industry agrees with them that we need the protection that some type of mandatory inspection would offer. Too often, the industry is assaulted by organizations seeking prominence in the fight for public safety, or against pollution, and inevitably they point to the lack of mandatory inspection for seafood. Nor do they bother with facts. Instead, they make outrageous statements to the effect that consumers are "playing Russian Roulette" when they eat fish. They do this to draw attention to pollution, but are not mindful of the fact that the areas of concern are closed to commercial fishing. Nor do they concern themselves with the human cost. I have seen workers turned away from their places of employment because the market had been destroyed by a totally unjustified scare. That human cost is considerable if you are trying to support your family. (See Appendix B.)

Getting back to Magnuson, I would say again that the Act is generally sound, as you have heard from many witnesses at many hearings. The problems that the industry and the resource itself have had are generally attributable to Agency policies, and personnel on the Councils and especially in the National Marine Fisheries Service leadership, but that is something we hope to change for the better, and not appropriate to this hearing. Once again, I thank you on behalf of the fishermen, the packing houses and processors, the co-ops, the truckers and dealers, the wholesalers and restaurants and shops who provide a wholesome and delicious food to consumers in this country and around the world.

* * * *

DRAFT

Testimony of Jeff Reichle
On behalf of Lund's Fisheries, Inc.
Before the Subcommittee on Fisheries Management
on the Reauthorization of the Magnuson Act
September 10, 1993

Mr. Chairman, I am president of Lund's Fisheries, Inc. of Cape May, New Jersey. We process a wide variety of species from the Mid-Atlantic region, including various squid species and Atlantic mackerel. I am here today to urge you to amend the Magnuson Act to eliminate the authority of the Secretary of Commerce to allocate portions of ~~the~~ Atlantic mackerel or other fish quotas to foreign harvesting fleets.

The discretionary authority of the Secretary to allocate shares of the harvest to the foreign fleets is contained in Section 201 of the Magnuson Act, and is commonly referred to as the "Total Allowable Level of Foreign Fishing" or "TALFF". An alliance of seafood processors and fishermen on the Atlantic has been formed to pursue an amendment to eliminate TALFF. The current members of the Alliance are Lund's, Seafreeze, Ltd. of Rhode Island, Point Judith

Fishermen's Cooperative, B&G Lobster and Shrimp Corporation of New York, Seafood Processors of Rhode Island, and the North American Lobster Corporation of New Jersey.

We recommend that TALFF be deleted from the Magnuson Act for the following reasons.

First, the marketing of TALFF products by foreign harvesting vessels cannot be controlled by the Federal Government and could seriously disrupt our efforts to develop and maintain markets for U.S. processed products.

For instance, the two most important export markets for U.S. producers of Atlantic mackerel are Canada and Jamaica. These markets support only a few thousand metric tons of product per year. U.S. producers enjoy a small competitive advantage over European producers due to our geographic location. This would immediately change if the Russians are invited into U.S. waters to harvest mackerel. Attorneys from the National Marine Fisheries Service freely admit that once the foreign harvested product leaves U.S. waters, the U.S. cannot prevent it from being sold into

Canadian and Jamaican markets, even if the company which applied to TALFF provides the U.S. with a written agreement not to sell mackerel into these markets. NMFS has recognized in its Federal Register notice that there is a pattern of failure to honor commitments made in exchange for TALFF.

Recently the Russians have been notorious for dumping product into any convenient market in exchange for hard currency. If Russian TALFF product shows up in Jamaica or Canada, the impact of this intrusion on our market price structure will be disastrous and it will take years to recoup our losses. The most effective way to avoid this disruption is to eliminate TALFF.

The second reason for deleting TALFF is to eliminate the controversy it has engendered in the East Coast in recent years. In an effort to put deals together inside Russia, U.S. fish brokers have held out TALFF as a bargaining chip. The promise of a new source of mackerel has triggered efforts directed at the fishery management council process, the Congress, and the Administration. We have been forced to aggressively oppose these efforts in order

to protect our markets. Both the Mid-Atlantic Fishery Management Council and the Department of Commerce have agreed with our position, but not without full scale warfare in the administrative process. This battle begins again next year when the Mid-Atlantic Council begins consideration of the fishery specifications for the 1995-96 fishing seasons. Fighting this battle wastes the resources of the seafood industry, the Congress, and the Administration. We want the Congress to end this fight next year.

The proponents of TALFF continue to make the argument that it is necessary to open new markets for U.S. fishermen. We adamantly disagree with this statement. All TALFF does is give the resource away to foreign fishermen. In the Federal Register notice by NMFS zeroing out TALFF for 1993, the agency stated that history has shown that U.S. fishermen can engage in joint ventures with foreign processors on a stand-alone basis. TALFF therefore does not enhance opportunities for U.S. fishermen. It serves only to threaten the markets being developed by traditional fishermen and U.S. producers.

Lund's appreciates the opportunity to testify at this hearing. Attached is a briefing paper we have prepare on this issue, as well as a copy of the July 21, 1993 Federal Register notice from NMFS which addresses many of the arguments on TALFF. We are committed to working with your Subcommittee in the coming months in a cooperative manner to arrive at a solution which is fair to U.S. fishermen and processors.

Proposal to Prohibit the Harvesting of Fish
Under the Management Jurisdiction of the United States
by Foreign Fishing Vessels

The Magnuson Fishery Conservation and Management Act currently authorizes the Secretary of Commerce to grant foreign fishing vessels permission to harvest fish in Federally-managed fisheries. This authority has been increasingly restricted over the years, and the last vestige of directed foreign harvesting is now being debated only in certain Atlantic fisheries. A coalition of fishermen and processors, the "No TALFF Alliance", believes the U.S. fisheries have matured to the point that the direct harvesting by foreign fishing vessels in U.S. waters is no longer justified under any circumstance. The continuation of the option to allocate harvesting privileges to the foreign fleets serves only to attract controversy, threaten the viability of developing markets for U.S. seafood products, and tie up the administrative resources of the National Marine Fisheries Service. The Alliance is proposing that any future harvest of fish in the Federally-managed fisheries be prohibited.

The No-TALFF Alliance is comprised of Lund's Fisheries, Inc. of New Jersey, Seafreeze, Ltd. of Rhode Island, and the Point Judith Fishermen's Cooperative of Rhode Island, B&G Lobster and Shrimp Corporation of New York, Seafood Processors of Rhode Island, and the North American Lobster Corporation of New Jersey. These companies participate in a variety of fisheries in New England and the Mid-Atlantic, including underutilized species such as mackerel. In recent years repeated efforts have been made by fish brokers to arrange for an allocation of harvesting privileges to foreign fleets (the so-called "TALFF" allocation) in the mackerel fishery. Members of the Alliance have consistently and vigorously opposed the TALFF allocation before the Mid-Atlantic Fishery Management Council and the Secretary of Commerce. Last year the Mid-Atlantic Council recommended that no TALFF be specified for the mackerel fisheries in 1993-94. The Secretary recently approved this recommendation.

The problems caused by the continuation of the TALFF option are three-fold. First, the TALFF option breeds controversy within the industry, the Congress, and the Administration. Second, the marketing of TALFF products cannot be controlled by the Federal government and may be highly disruptive to the fragile markets being developed by U.S. companies. Third, the continued debate over whether to provide for TALFF in the annual fishery specifications, whether to approve an individual TALFF application, and how to enforce restrictions wastes the limited resources of the National Marine Fisheries Service. These problems are explained in detail below.

Recent experience has demonstrated that U.S. fish brokers use

the TALFF option as a bargaining chip in trying to do business in countries such as Russia. The promise of a free source of fish to foreign companies triggers efforts directed at the fishery management council process, the Congress, and the Administration to make TALFF available over the objections of the domestic industry. The Mid-Atlantic Council was forced by the efforts of brokers to address the mackerel TALFF issue as part of its deliberation over the appropriate mackerel specifications in both 1991 and 1992.

The battle between domestic producers and proponents of the TALFF give-away was extremely divisive and controversial. The Council ultimately agreed that the optimum yield for mackerel would be achieved only by prohibiting any further mackerel TALFF. Instead of dropping the request, the proponents of TALFF challenged the Council's recommendations at NMFS and in the Congress. Members of the Alliance were forced to expend considerable resources defending their economic interests before the Council, NMFS, and the Congress on this issue. As long as TALFF remains an option for the fish brokers to use as an inducement, the domestic industry and the councils will be faced with "just one more request for TALFF".

Domestic producers must wage a vigorous campaign in opposition to TALFF due to its dramatic adverse impact on the established markets of U.S. producers. For instance, the best markets for U.S.-produced mackerel are Canada and Jamaica due to their geographic proximity to the U.S. Atlantic fisheries. These are the only markets in which U.S. producers have a competitive advantage vis-a-vis their Dutch and Russian competitors. A TALFF allocation would bring their foreign competitors into the U.S. Atlantic geographic area. Any product taken within U.S. waters may then be marketed directly into Canada and Jamaica. The Russians, in particular, have begun dumping products in many international markets recently due to their need for fast hard currency.

The markets in Canada and Jamaica are relatively small. Each market can support only a few thousand tons of product at any one time. If foreign producers dump TALFF product into these markets, U.S. producers' investments are immediately put at risk because they would have to move existing inventory at below cost in order to stay competitive. It would take years for these companies to recover from just one act of dumping mackerel TALFF product in either Canada or Jamaica.

Suggestions have been made to condition TALFF on a promise to market the product in third world markets where the U.S. has no active presence. NMFS attorneys have dispelled this as a viable safeguard. The U.S. has no jurisdiction to enforce such a condition once the product leaves U.S. waters. At most the Government can refuse to honor any future TALFF application from the violator. Additionally, the Federal Government has virtually no resources to dedicate to monitor the cargo movements. The damage would have already been done to the markets of U.S. producers. The

only way to protect against such damage to these fragile markets is to preclude TALFF.

Finally, consideration of TALFF continues to tax the limited resources of NMFS. In order to approve any council recommendation to prohibit TALFF, the Secretary of Commerce must determine whether such recommendation is consistent with the seven National Standards as set forth by Section 301 of the Magnuson Act. NMFS analysts have been required to perform analyses of the potential harms to the U.S. industry if TALFF is granted. For the reasons described above, such harm can be definitively proven only if TALFF is awarded and damage to the U.S. industry occurs. This ability to prove harm only after the fact has made it extremely difficult for the agency to perform the levels of analysis necessary to justify a TALFF prohibition. It has taxed the resources of agency analysts and the legal staff. The creative energies of these officials are better directed at working on the difficult fishery conservation and management problems facing the New England and Mid-Atlantic Councils.

Eliminating TALFF is the final step in a gradual evolution of the Magnuson Act. Prior to the enactment of the Act, foreign fleets had the right to fish within twelve miles of the coast pursuant to customary international law. The Congress initially asserted management jurisdiction over the fishery resources due to conservation concerns. In order to overcome objections from foreign nations being voiced through the U.S. State Department and defense-related concerns over freedom of navigation, the original Magnuson Act maintained the right of the foreign fleets to harvest fish in the new U.S. fishery conservation zone.

Immediately upon enactment of the Magnuson Act, Members of the House Merchant Marine and Fisheries Committee and the Senate Commerce Committee began to craft amendments which would promote the development of the U.S. fishing industry and "americanize" the fishery. Such amendments transformed TALFF from a right to a privilege, and made it subservient to joint ventures and domestic production involving U.S. harvesting vessels and processing operations. Additionally, a series of amendments created the "Fish and Chips" criteria used to allocate TALFF privileges among competing foreign fishing applicants when available.

The Fish and Chips policy was successful for a number of years in assisting the U.S. industry, primarily in the North Pacific, to develop the capital infrastructure necessary to compete in international and domestic markets against their established foreign competitors. It became apparent in the late 1980s, however, that TALFF was no longer a necessary component of the americanization process. Joint ventures became profitable on a stand-alone basis in the West Coast and certain Atlantic fisheries, and were eventually replaced by domestic operations. In the vast

majority of the Nation's fisheries, TALFF is no longer even discussed.

It is only in a few of the Atlantic fisheries that the TALFF concept continues to survive. As explained above, this is primarily a function of fish brokers seeking to profit in the chaotic economic environment in Eastern Europe and the former republics of the Soviet Union. These brokers have convinced a few fishermen that they can open up vast new markets for mackerel and other fish products in Eastern Europe. The truth is that any TALFF venture would be extremely short-term, a "last shot" for only a few U.S. fishermen, as the product is taken and dumped into Canada, Jamaica, and other U.S. markets. TALFF no longer has a value as a promotional tool to develop the Atlantic fisheries. It does nothing to assist in the development of long-term markets for U.S. caught and processed fish. It has instead become a threat to existing market development. Additionally, it has acted as an impediment to negotiating "stand-alone" joint venture operations with foreign seafood companies that hear that TALFF is still an option from U.S. fish brokers.

The need to maintain reciprocity to engage in the fisheries of other foreign nations and to protect the U.S. negotiating position at the Law of the Sea Conference have been raised as defenses against expressly eliminating TALFF from the Act. These defenses are spurious and should not be given serious consideration by the Congress.

Permission to fish in Russian waters in the Bering Sea has not been made contingent on allowing the Russians into the Atlantic mackerel fisheries. U.S. participation in the Russian fisheries has been the result of the willingness of U.S. companies to pay hard currency for the right to fish. Even if it is later made a condition of entry into Russian waters, basing a TALFF allocation on such a goal is tantamount to trading off Atlantic fishermen and processors for the benefit of large scale corporate operations in the North Pacific. Fundamental fairness to the traditional participants in the Atlantic should compel the Congress to oppose this form of reciprocity.

The use of the unfulfilled Law of the Sea discussions as a reason to forestall action is an old gambit. It was unsuccessfully used to prevent the adoption of the Magnuson Act. Nations have already adopted the most relevant and beneficial features of the proposed Law of the Sea Treaty, and have uniformly asserted the right to regulate against foreign fishing when it is in their national interests. The Congress itself severed the relationship between the Magnuson Act and the Law of the Sea Conference in 1987 by deleting all such references within the Act.

For the reasons discussed above, the Alliance recommends that the Congress move forward to prohibit direct harvesting by foreign

fishing vessels in U.S. waters by deleting the TALFF authority.

and possession limit, as specified in § 640.23(g).

(5) Transfer or receive of spiny lobster in or from the EEZ caught under the bag and possession limits, as specified in § 640.23(h).

4. In § 640.20, paragraph (b) is revised to read as follows:

§ 640.20 Seasons.

(b) *Special recreational fishing seasons.*

(1) *EEZ off Florida.* There is a 2-day special recreational fishing season in the EEZ off Florida on the last Wednesday and successive Thursday of July each year during which fishing for spiny lobster is limited to diving or use of a bulky net or hoop net. (See § 640.22(a) for general prohibitions on gear and methods.) In the EEZ off Monroe County, Florida, no person may harvest spiny lobster by diving at night, that is, from 1 hour after official sunset to 1 hour before official sunrise, during this 2-day special recreational fishing season.

(2) *EEZ other than off Florida.* There is a 2-day special recreational fishing season in the EEZ other than off Florida during the last Saturday and successive Sunday of July each year during which fishing for spiny lobster may be conducted by authorized gear and methods other than traps. (See § 640.22(e) for general prohibitions on gear and methods.)

§ 640.22 [Amended]

5. In § 640.22, in paragraph (a)(2), the reference to: "§ 640.23(c)" is revised to read "§ 640.23(d)".

6. In § 640.23, paragraphs (b) through (g) are redesignated as paragraphs (c) through (h); in newly designated paragraph (d), in the third sentence, the reference to "this paragraph (c)" is revised to read "this paragraph (d)"; in newly designated paragraph (e), the reference to "paragraph (b) of this section" is revised to read "paragraph (c) of this section"; in newly designated paragraph (f), the reference to "paragraphs (a) or (c) of this section" is revised to read "paragraphs (a), (b), or (d) of this section"; in newly designated paragraph (g), the reference to "paragraph (a) of this section" is revised to read "paragraphs (a) and (b) of this

section"; in newly designated paragraph (h), the reference to "paragraph (a) or (c) of this section" is revised to read "paragraphs (a), (b), or (d) of this section"; paragraph (a) is revised; and new paragraph (b) is added to read as follows:

§ 640.23 Bag and possession limits.

(a) *Commercial and recreational fishing season.* Except as specified in paragraphs (c) and (d) of this section, during the commercial and recreational fishing season specified in § 640.20(a), the daily bag and possession limit of spiny lobster in or from the EEZ is six per person.

(b) *Special recreational fishing seasons.* During the special recreational fishing seasons specified in § 640.20(b), the daily bag and possession limit of spiny lobster—

- (1) In or from the EEZ off Monroe County, Florida is six per person;
- (2) In or from the EEZ off Florida other than off Monroe County, Florida is twelve per person; and
- (3) In or from the EEZ other than off Florida is six per person.

[FR Doc. 93-17272 Filed 7-16-93; 3:04 pm]
BILLING CODE 3510-22-41

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

50 CFR Part 655

[Docket No. 921221-3162; ID No. 101392B]

Atlantic Mackerel, Squid, and Butterfish Fisheries

AGENCY: National Marine Fisheries Service (NMFS), NOAA, Commerce.

ACTION: Final specifications for the 1993 and 1994 Atlantic mackerel, squid, and butterfish fisheries.

SUMMARY: NMFS issues these final specifications for the 1993 and 1994 fishing years for Atlantic mackerel, squid, and butterfish. Regulations governing these fisheries require the Secretary of Commerce (Secretary) to publish specifications for up to 3 consecutive fishing years. This action is intended to fulfill this requirement and promote the development of the U.S. Atlantic mackerel, squid, and butterfish fisheries.

DATE: 1993 January 1, 1993, through December 31, 1993.

ADDRESSES: Copies of the Mid-Atlantic Fishery Management Council's "quota paper" and recommendations are available from John C. Bryson, Executive Director, Mid-Atlantic Fishery Management Council, room 2115, Federal Building, 300 South New Street, Dover, DE 19901. Copies of the environmental assessment are available from Richard B. Roe, Northeast Regional Director, National Marine Fisheries Service, One Blackburn Drive, Gloucester, MA 01930.

FOR FURTHER INFORMATION CONTACT: Myles Raizin, 508-281-9104 or Richard Seomans, 508-281-9244.

SUPPLEMENTARY INFORMATION:

Regulations implementing the Fishery Management Plan for Atlantic Mackerel, Squid, and Butterfish Fisheries (FMP) prepared by the Mid-Atlantic Fishery Management Council (Council), appear at 50 CFR part 655. These regulations stipulate that the Secretary will publish a notice specifying the initial annual amounts of the initial optimum yield (IOY) as well as the amounts for allowable biological catch (ABC), domestic annual harvest (DAH), joint venture processing (JVP), and total allowable levels of foreign fishing (TALFF) for the species managed under the FMP. No reserves are permitted under the FMP for any of these species. Regulations implementing Amendment 4 to the FMP allow the Council to recommend specifications for these fisheries for up to 3 consecutive years.

Since an update of the Atlantic mackerel stock assessment will be forthcoming in 1994, the Council has chosen to recommend specifications for 1993 and 1994 only. Procedures for determining the initial annual amounts are found in § 655.22.

Proposed initial specifications for the 1993 and 1994 Atlantic mackerel, squid, and butterfish fisheries were published on December 22, 1992 (57 FR 60786).

The following table contains the final initial specifications for Atlantic mackerel, *Loligo* squid, *Illex* squid, and butterfish. These specifications are based on the recommendations of the Mid-Atlantic Fishery Management Council and public comment.

TABLE.—FINAL INITIAL ANNUAL SPECIFICATIONS FOR ATLANTIC MACKEREL, SQUID, AND BUTTERFISH FOR THE FISHING YEARS, JANUARY 1 THROUGH DECEMBER 31, 1993 AND JANUARY 1 THROUGH DECEMBER 31, 1994.

(In metric tons (mt))

Specifications	Squid		Atlantic Mackerel	Butterfish
	Loligo	Illex		
Max OY ¹	44,000	30,000	N/A	16,000
ABC ²	44,000	30,000	850,000	16,000
IOY	44,000	30,000	120,000	10,000
DAH	44,000	30,000	120,000	10,000
DAP	44,000	30,000	50,000	10,000
JVP	0	0	55,000	0
TALFF	0	0	0	0

¹ Max OY as stated in the FMP;² Not applicable; see the FMP;³ IOY can rise to this amount;⁴ Contains 15,000 mt. projected recreational catch based on the formula contained in the regulations (50 CFR part 655).

In addition to these final initial specifications, the Regional Director imposes four special conditions for the 1993 and 1994 Atlantic mackerel fisheries as follows: (1) Joint ventures are allowed, but river herring bycatch south of 37°30' N. latitude may not exceed 0.25 percent of the over-the-side transfers of Atlantic mackerel; (2) the Regional Director will monitor fishing operations and manage harvest to reduce impacts on marine mammals in prosecuting the Atlantic mackerel fishery; (3) the IOY for Atlantic mackerel may be increased during each fishing year, but the total will not exceed 200,000 mt; and (4) applications from a particular nation for joint ventures for 1993 or 1994 will not be approved until the Regional Director determines, based on an evaluation of performances, that the nation's purchase obligations for 1991 and previous years have been fulfilled.

Comments and Responses

Nine sets of comments on the proposed initial specifications were received during the comment period. One set of comments addressed the specifications for *Loligo* and *Illex* squids. All commenters addressed the specification of zero TALFF for the Atlantic mackerel fishery. Six sets of comments opposed zero TALFF and three sets of comments supported zero TALFF. All commenters favored joint venture processing in the Atlantic mackerel fishery.

Comment: The ongoing capitalization of the squid fishery in 1992, as the vessels convert to refrigerated freezer systems (RFSW), has greatly increased the physical capacity to take the squid resources. There is no longer any ability to allocate to the JVP within the 1993-1994 season the 15,000 mt. projected recreational catch based on the formula contained in the regulations (50 CFR part 655).

of the squid quotas to the DAP is required under the law, and would promote the continuing development of the U.S. industry in the Atlantic.

Response: NMFS agrees that the capacity of the squid fishery has expanded with the conversion of vessels to RSW systems. A record harvest of approximately 17,000 mt of *Illex* squid in 1992, up from 11,700 mt in 1991, confirms this. Circumstances at this time require the reservation of squid quotas to DAP; however, NMFS recognizes the dynamic nature of the squid fisheries, and the Council, via the annual quota paper, must continue to defend their annual recommendations for specifications in these fisheries.

Comment: NMFS and the Council would be fulfilling the intent of Congress when it strengthened the promotional role of the Councils by enacting the American Fisheries Promotion Act of 1980 (The Act). Commonly called the "Breaux Bill," the Act made three major amendments to the Magnuson Fishery Conservation and Management Act (Magnuson Act) in an attempt to accelerate dramatically the phaseout of the foreign fleets and the growth in the domestic harvesting and processing sectors. Section 233 of the Act amended section 2(b)(6) of the Magnuson Act by declaring as a purpose of the Magnuson Act the need to "ensure that optimum yield determinations promote the development of the U.S. fishing industry."

Response: Atlantic mackerel caught and processed by foreign vessels in a directed fishery may compete directly with U.S. products in targeted markets. NMFS recognizes that the heavily capitalized and often subsidized vessels employed by foreign nations can produce mackerel at a lesser cost than the present U.S. fleet and, therefore,

undercut prices needed to promote the growth of the domestic fishery. The U.S. processors of Atlantic mackerel must establish a base in foreign markets upon which the U.S. industry can grow. The specification of TALFF can be an impediment to this potential growth. Conversely, the specification of zero TALFF might promote the growth of the domestically produced product.

Comment: In its assessment of relative benefits of zero TALFF to the Nation, NMFS should acknowledge in the final rule that there is significant, albeit unquantified, value which can be attributed to employment growth and the ripple effect of such economic activity in the local economies.

Response: NMFS recognizes that there may be external benefits of implementing a zero TALFF specification. However, the precise or accurate measurement of a "ripple" or multiplier effect on local or regional economies cannot be accomplished at this time. NMFS also recognizes that there may be external costs of implementing zero TALFF that may appear in the form of geopolitical considerations including political, leverage, goodwill, and diplomacy. NMFS has considered these non-quantifiable benefits and costs in issuing a zero TALFF specification for the 1993/1994 Atlantic mackerel fisheries.

Comment: A pro-TALFF argument concurrent with the development of a control date is not consistent policy. This serves only to place restrictions on the domestic fishermen, many of whom are soon to be displaced, while opening access to foreign interests.

Response: NMFS notes that establishment of a control date does not place restrictions on domestic fishermen. A control date is intended only to advise the public of potential

the industry after the century.

Comment: The industry has worked very hard and invested large sums of money to develop both at-sea and onshore processing facilities to harvest, process, and sell Atlantic mackerel. These investments, which total many millions of dollars and have resulted in many new jobs in this community, were made with the knowledge that foreign fishing was being phased out. Industry supports and has participated in Federal joint ventures and State internal waters processing projects and feels that the United States must continue in efforts to "Americanize" the fishery. Any release of TALFF would send the wrong message to those who have invested and are continuing to invest in the growth of this fishery.

Response: NMFS and the Council also view TALFF as an impediment to continued domestic investment in the Atlantic mackerel fishery at this time.

Comment: The proposed specification of zero TALFF conflicts with the known biological fact that a large Atlantic mackerel biomass that is not adequately harvested perpetuates the present reduced biomass for higher valued species such as haddock, and thereby reduces the commercial success of U.S. boats fishing for those higher value species.

Response: Unpublished studies that exist on this subject are considered too preliminary to describe authoritatively the extent of any ecological relationship between mackerel and haddock.

Comment: The proposed specification of zero TALFF compels U.S. boats, which could be utilized effectively as catcher boats for foreign fishing vessels, to remain at the dock, thereby reducing vessel revenues and sacrificing badly needed jobs and incomes for their crews.

Response: NMFS recognizes the need to utilize the catcher boats and their economic impacts on individuals and communities involved. A successful JVP has already occurred in the absence of TALFF, and the Council and NMFS believe that a zero TALFF should not be an impediment to future joint ventures. It may be due to a decision made by a foreign company not to undertake a joint venture in the absence of TALFF that causes U.S. catcher boats to remain at the dock. Successful joint ventures have been conducted without allocations to vessels of a country for directed fishing. In addition, there is no assurance that a foreign vessel, once assured of availability of fish for a direct harvest, will necessarily vigorously pursue the joint venture.

NMFS review. The estimated domestic harvest (DAH) for 1993 and the portion of the harvest that would be processed by U.S. fish processors. On that basis, it initially found that 35,000 mt of the Atlantic mackerel DAH would not be used by domestic processors. That amount was later increased to 55,000 mt when NMFS received more current information in the form of another request for JVP to support a greater DAH and JVP after the proposed specifications were published. Since there was no similar information presented to indicate that the additional 20,000 mt would be needed for the DAP, the full increase in the DAH was then included as part of the JVP.

Comment: With respect to joint ventures involving Russian vessels, a zero TALFF specification would undercut the U.S. and allied nations' efforts to foster economic growth that will occur in each participating country from increased trade, an overriding U.S. foreign end trade policy objective.

Response: The specification of zero TALFF, in and of itself, does not constitute an obstacle to trade. Russian vessels that existed under the former "Soviet Union" have, in the recent past, purchased large quantities of Atlantic mackerel from both joint ventures (24,000 mt in 1990 and 11,000 mt in 1991) and internal water processing (1,923 mt in 1992) without TALFF. NMFS realizes that TALFF would serve to enhance the profits of foreign partners in joint venture schemes.

However, the "fish and chips" policy of the past, where amounts of JVP and purchases of U.S. processed product were conditions of a TALFF fishery, is now viewed by NMFS to be an impediment to the development of the U.S. fishery.

Comment: TALFF makes the economics of a joint venture more viable. Offshore processing operations can average their expenses with the lower costs of directed catch. This helps U.S. mackerel compete on the world market. Strict joint ventures or internal water processing projects are not profitable. TALFF contributes to the U.S. government budget via a poundage fee of \$58.00 per metric ton. The United States needs to increase its volume of scale to lower unit costs and be more competitive on international markets because the U.S. domestic market is very limited. The commenter recommends a TALFF of 25,000 mt per year for 1993 and 1994.

Response: NMFS recognizes that pursuing a "fish and chips" policy will yield benefits to the Nation, especially in the short term. However, the goal of

growth will be only in the Atlantic mackerel fishery. This can happen only in the absence of TALFF.

Comment: The key assumption in the Council's benefit-cost analysis is that U.S. caught and processed mackerel tonnages will increase by 20 percent each year for 10 years from 1991 through 2000, and beyond. This assumption is seriously flawed and has already been proven incorrect. According to NMFS, U.S. landings in 1992 will be no more than 12,500 mt, which is more than 7,000 mt less than the approximately 20,000 mt needed to validate the benefit-cost analysis. The record of the 1992 fishery demonstrates that the no-TALFF policy is not contributing to the development of the U.S. fishery.

Response: To complement the Council's cost-benefit analysis, which assumed zero domestic growth with the allocation of TALFF and 20 percent per year domestic growth with zero TALFF, NMFS performed a sensitivity analysis that examined the effects of TALFF under different conditions and assumptions. Results of the sensitivity analysis indicated that large TALFF allocations may yield the highest net national benefit under certain conditions and assumptions, especially when there is zero growth in domestic landings. When there is moderate growth in domestic landings (5 percent per year), and/or joint venture and TALFF allocations are rapidly transferred to domestic landings (50 percent per year), then there is little difference, in terms of net national benefit, between zero TALFF and large TALFF allocation policies.

Comment: Any direct foreign mackerel fishing carried out by Community (European Economic Community) fishing vessels will be mainly intended for West African markets that are not of interest to the U.S. industry. The specifications do not consider the advantages to the U.S. industry of such cooperation with Community enterprises. After all, this is the philosophy behind the Governing International Fisheries Agreements.

Response: The U.S. industry has not excluded West Africa as a potential market for U.S. processed Atlantic mackerel. This is especially true with regard to the placing of Atlantic mackerel on the list of commodities for inclusion under the Public Law 480 program of the Department of Agriculture. This program provides credit to underdeveloped nations to purchase U.S. produced agricultural and fisheries products.

Certain U.S. processors and members of Congress based their opposition to allocations to Russian vessels on concerns that the production from such vessels would be landed in certain foreign markets developed by U.S. processors. NMFS sought to alleviate these concerns through discussions and correspondence with the Russian fishing representatives, in particular by seeking assurances that production would be landed in the Russian Federation for domestic consumption. That matter was not fully resolved because the Russian fishing companies concluded that delays in these specifications made the prosecution of a spring mackerel fishery no longer feasible.

Changes From the Proposed Specifications

Several changes from the proposed specifications regarding Atlantic mackerel are made in these final specifications. The specification for IOY, and in turn, DAI, and JVP were increased 20,000 mt to accommodate potential applicants for a JVP fishery in Atlantic mackerel. In addition to an application pending for 10,000 mt of JVP, a firm has made inquiries regarding an additional 20,000 mt of JVP. The proposed initial specifications called for a total of 35,000 mt for the 1993 and 1994 fisheries. Since it is the policy of both the Council and NMFS to promote JVP in this fishery, the Regional Director has increased the DAI and IOY to 120,000 mt from the proposed amount of 100,000 mt to provide for a JVP

allocation of 55,000 mt from a proposed level of 35,000 mt. This increase is considered to be in the best overall interest of the Nation.

Classification

This action is authorized by 50 CFR part 655 and complies with Executive Order 12291 and the National Environmental Policy Act.

Authority: 16 U.S.C. 1801 *et seq.*

List of Subjects in 50 CFR Part 655

Fisheries, Reporting and recordkeeping requirements.

Dated: July 15, 1993.

Nancy Foster,
Acting Assistant Administrator for Fisheries,
National Marine Fisheries Service.

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JERSEY COAST ANGLERS ASSOCIATION P.O. BOX 111, SPRING LAKE, N.J. 07762

ABSECON SALTWATER SPORTSMEN	LAWRENCE SPORTSMAN N & F CLUB	SANDY HOOK BAY ANGLERS
AMERICAN LITTORAL SOCIETY	LEISURE KNOLL FISHING CLUB	CLEAN OCEAN ACTION BERKELEY
STRIPER CLUB	LEISURE VILLAGE WEST F & C	SHORE SURF CLUB
BRADSHAW BASS CLUB	LONG BRANCH FISHING CLUB	SILVERTON FISHING CLUB
CAPE MAY PARTY BOAT/CHARTER ASSN.	MANASQUAN FISHING CLUB	SUNRISE ROD & GUN CLUB
ELCO ROD & REEL	DELAWARE RIVER FISHERMAN'S ASSN.	SPRING LAKE LIVE LINERS
FISH HAWKS	HERDER COUNTY ANGLERS ASSN.	SURF INTERNATIONAL
FORKED RIVER TUNA CLUB	NATURAL RESOURCES PROTECTIVE ASSN.	SURF KINGS F & C
NIMRA STRIPER CLUB	NEWARK BAIT & FLY CASTING	BRIGHTLINE SHARKS
NIGHLANDS ROD & GUN	N.J. BEACH BUGGY ASSN.	TEAM MULLET
HOLIDAY CITY F & C	N.J. SALTWATER FLYRODDERS	THOUSAND FATHOM CLUB NORTH
HUDSON RIVER FISHERMEN'S ASSN. N.J.	PICATINNY SALTWATER SPORTSMAN CLUB	FOUR SEASONS ROD & GUN CLUB
JERSEY COAST SHARK ANGLERS	POLISH DOUBLDIPS FISHING CLUB	GRADY WHITE MARLINERS
TROUT UNLIMITED TONS RIVER CHAPTER	SALTWATER ANGLERS OF BERGEN CTY	SHORE CATON FISHING ASSN.
LONG BEACH ISLAND FISHING CLUB	LEONARDO PARTY & PLEASURE BOATMAN'S ASSN.	SOUTH JERSEY SURFCASTERS
BEAUMER FISHING CLUB	ATLANTIC CTY. PARTY & CHARTER CAPT. BOAT ASSN.	CENTRAL JERSEY ANGLERS
HOLIDAY CITY WEST FISHING CLUB	ITALIAN AMERICAN SURF FISHING CLUB	ROD'S SURF DEVILS
NORTHEAST MAKO OWNERS' CLUB	MANASQUAN MARLIN & TUNA CLUB	BILLFISH FOUNDATION
SEASIDE HEIGHTS FISHING CLUB	SOUTH JERSEY SALTWATER ANGLERS CLUB	BLUE FISH EXPRESS
DOUBLE HEADER	GREATER POINT PLEASANT CHARTER BOAT ASSN.	THE FISHING CLUB
DELAWARE SURF CASTERS	DELAWARE MOBILE SURF FISHERMAN	CAREFREE ANGLERS
SHARK RIVER SURF FISHING CLUB	FORTESQUE CAPTAINS AND BOATOWNERS ASSN.	UNION ELKS FISHING CLUB
UNITED MOBILE SPORTFISHERMAN INC.	STATEN ISLAND FED. OF SPORTSMEN CLUBS	ASBURY PARK FISHING CLUB
THOUSAND FATHOM CLUB SOUTH	NEW JERSEY FEDERATION OF SPORTSMEN CLUBS	BAVHEAD SHORES CLUB
WEST ORANGE FISHING CLUB	VILLAGE HARBOR FISHING CLUB	SCHUYLER TUNA FISHING CLUB
THE ANGLERS CLUB OF ABSECON ISLAND	BEACH HAVEN MARLIN & TUNA CLUB	FISHER ISLAND CONSERVANCY
RHODE ISLAND CHARTER BOAT ASSN.	ASSN. OF SURF ANGLING CLUBS	LEGAL DEFENSE FUND
NORTHEAST PHILADELPHIA SURF FISHING CLUB	WOMEN'S SURF FISHING CLUB OF N.J.	RATAIN BAY FISHING CLUB
FORTESQUE ANGLERS		STRIP SURF CLUB

CONGRESSIONAL TESTIMONY ON REAUTHORIZATION OF THE MAGNUSON FISHERY CONSERVATION AND MANAGEMENT ACT OF 1976 SEPTEMBER 10, 1993

The Jersey Coast Anglers Association (J.C.A.A.) thanks the Chairman, Congressman Tom Manton, and the Subcommittee on Fisheries Management for conducting this Field Hearing on H.R. 780 in Brooklyn, New York. The J.C.A.A. also thanks Congressmen Frank Pallone and William Hughes for requesting Jersey Coast Anglers Associations to testify at this hearing.

The J.C.A.A. is composed of 88 fishing clubs and organizations with a membership of over 30,000 anglers. This association was formed to enhance the sport of angling for all persons and for the preservation and protection of natural resources. We have member clubs and associations in New Jersey, Rhode Island, New York, Pennsylvania and Delaware. Two of the organizations we represent in the New York Metropolitan Area are the Staten Island Federation of Sportsmen Clubs, with over 5,000 members, and the Natural Resources Protective Association, also located on Staten Island. Three environmental organizations, the American Littoral Society, Natural Resources Protective Association, and Clean Ocean Action are also J.C.A.A. members.

SUGGESTED CHANGES TO THE MAGNUSON ACT:

1. WHO SHOULD BE APPOINTED TO THE COUNCIL?

Each state should have the opportunity to appoint at least three representatives. They should include one commercial fisherman, one recreational fisherman and the State Director of Marine Fisheries. Other representatives such as scientists, habitat experts and public representatives should be appointed at large and not be counted against the state's other three representatives.

There has been a great deal of testimony given before this committee on council appointments. The Marine Fish Conservation Network has given testimony that commercial and recreational fishermen cannot objectively vote on issues in which they have a financial interest. They also stated that the council should have more members who are "nonusers." They stated that more appointments should be made of non-fishers experienced in fisheries conservation and management because it is felt there would be less economic conflict of interest on their part. Where would these individuals come from? As an example let's look at the composition of the Mid-Atlantic Council.

The Mid-Atlantic Council is comprised of eighteen members. Six are State Directors, leaving twelve appointed seats. Four of the current members are professors who work for various academic institutions. Of the remaining positions, one member is a paid lobbyist of an environmental organization, one is the president of a sport-fishing research institution, four are affiliated with the commercial fishing community, and another is a part-time charter boat captain and professor of Marine Science at a local college. Only the remaining member would meet J.C.A.A.'s criteria of a "non-user".

Although by their definition the Mid-Atlantic Council has an abundance of non-users, does this really mean there are no economic pressures on this group? No! This is because it is possible for some professors to apply for grants to do research for NMFS and other organizations. It is tempting to become a "yes man" for those organizations that control your grant money and are in the position to comment on future grant proposals. Just because some people are considered non-user does not mean that they are not under the same economic pressure to secure their reappointment.

An appointee who is a paid employee of an environmental group would need to support that particular group's agenda whether or not it was appropriate to a specific management plan. That is the reason J.C.A.A. does not support the appointment of any paid lobbyists to council seats even if they represent either commercial or recreational fishermen's groups.

Is there really a problem of non-user participation on the Mid-Atlantic Council? No! If you do not count the State Directors over fifty percent of the Mid-Atlantic Council is comprised of non-users. The real problem is trying to find a working commercial or recreational fisherman on this council. Ultimately it is the fisherman, either commercial or recreational, who has the most to gain or lose from any council decision. In its initial legislation, Congress understood and supported this concept, realizing that no plans would be successful unless it involved the people who would have to implement and live with the consequences. It will never be possible to have enough law enforcement to guarantee compliance by recreational or commercial fishermen if they do not believe in the long term benefits of the plan. We all know that a plan only works with the voluntary compliance of a majority of fishermen. J.C.A.A. does understand, however, that some council members may have financial interests in certain fisheries and supports full public disclosure of all these interests on an ongoing basis. The Secretary of Commerce would then have this information when evaluating any plan.

2. HOW SHOULD COUNCIL MEMBERS BE APPOINTED?

When a seat is open or if the governor does not wish to reappoint the current council member, the governor must submit the names of three qualified persons to the National Marine Fisheries Service(NMFS). NMFS. shall evaluate their qualifications and consult with either the commercial or recreational organizations as appropriate to insure that these individuals represent and have the recommendations of these groups.

If the governor wishes to reappoint a person for another term, the governor may submit only this council member's name for reappointment, provided that N.M.F.S. has not objected to this reappointment in writing or has not received objections from the organizations or public within the state that this council member represents.

3. HIGHLY MIGRATORY AND LARGE PELAGIC SPECIES MUST BE PUT BACK IN THE COUNCIL SYSTEM

After observing the delays and the relative ineffectiveness of the NMFS bluefin tuna and shark management plans, the J.C.A.A. is convinced that highly migratory species management should be returned to the Regional Fishery Management Councils. Though they too are ineffective it's still likely that the councils can respond at a faster pace and take into account the public comments which NMFS has largely failed to do. The plans produced by NMFS can only be described as elitist. Let's discuss three of the management plans that have come from NMFS without going through the council.

The swordfish fishery was the first time JCAA dealt with a management plan designed solely by NMFS. Swordfish has had a traditional recreational and harpoon fishery dating since the 1900's. This fishery has been practically eliminated by the decisions of NMFS. This plan was designed to protect the long-line fleet which had not fished in the fishery until the 1960's, but which now controls almost the entire catch. They had the high-priced lobbyists looking out for their interests.

The management of bluefin tuna is another example of NMFS attempt to manage fisheries for special interests and being influenced by their lobbyists. About one-third of the bluefin quota is provided to five purse seine vessels owned by three families, who are guaranteed millions of dollars from a public resource without bidding or paying any royalties. Their only expense, other than the lobbying funds required to keep this incredible abuse of the public trust, is a permit for each boat, the same fee required of the average fisherman who must compete for the mere opportunity to catch a medium or giant bluefin tuna before the quota is filled.

NMFS, through its management plan, has so restricted the school bluefin tuna catch that the traditional party boat fishery and private recreational boat fishery in the Metropolitan New York-New Jersey area has almost been eliminated. Thus, the opportunity for the average angler to even catch and keep one school bluefins has been severely restricted. Now NMFS plans to institute an angling permit for bluefin with a fee similar to that of the \$20 fee for catching a valuable giant. Yet, the number of school bluefin allowed to be caught is not equal to the number of anglers who have traditionally participated in that fishery.

Bluefin tuna fishing along the New Jersey Coast has been so poor this year that the largest Bluefin Tuna taken was a 179 pounder beached by a surfcaster at Brant Beach. If NMFS has their way in 1994 that individual would be prosecuted for his incredible catch made without a permit, which will only be issued to boats in any case.

Though the traditional fishery for sharks has been a recreational one, and the market for mako sharks was developed by anglers selling those fish to restaurants, NMFS developed a shark management plan which provided most of the catch to the commercial side and eliminated recreational fishermen from selling their catch due to the elitist concept that such fishermen are wealthy and don't have to offset their fishing costs. Sharking has traditionally been the poor man's big game fishing, and the sale of an occasional mako or thresher made it possible for the average fisherman to enjoy that sport. All recreational fishermen and many charter boat captains and mates are now prohibited from selling sharks unless they can prove that at least 50% of their income is earned from that business. Yet, NMFS allows any commercial fisherman to buy a shark sale permit even if he has never caught a shark before.

The J.C.A.A. endorses legislation which would bring management of highly migratory species back to the Councils. At least the Councils will have to listen to the average fisherman and take into account his feelings. The common fisherman feels ignored when these plans are handled just by NMFS without the council. There is the perception that when it gets at that level instead of the council level it's the high priced lobbyists who take over. What we get is a "Washington Beltway Plan" designed by Beltway Lobbyists, both recreational and commercial, who don't know what is actually happening in the real world. These people are not in the field talking to the common fishermen, just the rich commercial or recreational fishermen. The council system allows for public comments and public participation of the common fishermen.

4. WHERE MEETINGS ARE HELD

We feel that it is imperative for N.M.F.S., the Atlantic States Marine Fisheries Commission and the Regional Councils to hold their meetings so they are accessible to both commercial and recreational anglers who want to testify. These meetings should be held close to a major airport or highway so people wishing to voice their opinion and participate in the process can do so with relative ease. This means they would not lose a great deal of time in travel. The meetings should be held at a motel or hotel that will not make the cost prohibitive to the average person. If NMFS was not paying in full the cost of lodging, meals and other expenses, I wonder if the council members would be holding their meetings where the cost of a room is over one hundred dollars a night, parking is twenty dollars a day, and an inexpensive lunch is twelve dollars. Not only is the fisherman losing a couple of days pay by attending the meeting but it is also costing him a week's wages. This makes it difficult for the public and the average fisherman to attend these meetings. The Magnuson Act was designed to involve the public. With the exorbitant cost required to attend these meetings the spirit of that act has been weakened.

5. HABITAT

Jersey Coast Anglers Association feels that in order for the councils to be more effective in their management plans they should have more input into the conservation of habitat critical for the various species under their jurisdiction. The Councils and NMFS find themselves managing a smaller resource because of continuing deteriorating environmental conditions. In the last thirty years we have seen the loss of crucial nursery habitat in the bays and estuaries due to coastal development. In addition we are just learning of the effects of chemically induced pollution and its alterations of the sexual and functional development of fish embryo and adults alike.

We recommend the implementation of a policy to protect and restore critical fish habitat in conjunction with regional management councils and other federal agencies. Research programs should be developed to address fisheries related habitat values, and the effects of chemical pollution on the ecosystem. There should be greater involvement by the councils in the National Estuarine Program as one of the vehicles to accomplish this. There should also be greater interagency cooperation and communication with regard to habitat issues.

In the past we have seen the Regional Councils and NMFS being asked to take a larger role in environmental issues without being appropriated the necessary funds by Congress. It's easy for Congress to give the responsibility to the councils but it's been difficult for them to appropriate adequate funds for such a vast undertaking. If Congress really wants the Regional Councils and NMFS to carry out this important task, they must appropriate the necessary funds.

I would like to thank the Committee for giving me the opportunity to appear before them and to present this testimony. Since we compiled this information on such short notice J.C.A.A. would like the opportunity to make additions to our testimony at a later time.

Release for Tomorrow


 Thomas P Fore

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STATEMENT
OF
GORDON C. COLVIN

DIRECTOR OF MARINE RESOURCES
NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

BEFORE
THE HOUSE SUBCOMMITTEE
ON
FISHERIES MANAGEMENT
ON SEAFOOD SAFETY ISSUES

SEPTEMBER 10, 1993

Good Morning Mr. Chairman. On behalf of Commissioner Tom Jorling, I would like to thank the Subcommittee on Fisheries Management for inviting the Department of Environmental Conservation to testify on the important issues of seafood safety and reauthorization of appropriations for the Magnuson Fishery Conservation and Management Act. Since we have previously testified before the Subcommittee regarding the Magnuson Act, today's testimony will focus on a seafood safety issue of considerable importance to the Department - The National Shellfish Sanitation Program. However, I will be pleased to answer any questions you may have regarding either our prepared testimony or the Magnuson Act.

In New York, the responsibility for implementation of the National Shellfish Sanitation Program rests with the Department of Environmental Conservation. This responsibility principally falls into three areas: classification of shellfish growing areas as approved, not approved or conditionally approved for harvest of shellfish; patrol of shellfish growing areas to prevent illegal harvest; and sanitary inspections of shellfish shippers and processors. The National Shellfish Sanitation Program has been jointly administered by the U.S. Food and Drug Administration and state governments since the 1920s. The program has evolved considerably in both sophistication and the nature of the state/federal partnership since its inception. However, the preeminent feature of this program throughout its history has been the consistent recognition that the primary responsibility for carrying out the three phases of the program identified above lies with the states.

In New York, we take this responsibility very seriously. We recognize our obligation to the seafood consumers of the state, as well as the shellfish industry itself, to do all in our power to assure that only sanitary, wholesome shellfish are harvested and marketed for human consumption. The effort involved in this enterprise is formidable. Each of our 75 shellfish growing areas must be reevaluated triennially, and water samples must be secured and analyzed on a regular basis for coliform and fecal coliform contamination from all approved shellfish harvesting areas under adverse pollution conditions. Our staff collects and analyzes over 14,000 sea water samples per year for this purpose alone. In addition, we are required to conduct periodic inspections of some 370 approved shippers and processors of shellfish in the state. Our Law Enforcement staff patrols approximately 200,000 acres of waters uncertified for the harvest of shellfish scattered in various locations throughout the estuaries surrounding New York City and Long Island. Together, over 25 staff years per year of effort go into shellfish growing area certification and shellfish inspection programs annually. A substantial amount of time is also expended in the patrol of uncertified areas to prevent the illegal harvest of shellfish.

Since 1981 New York has been an active member and supporter of the Interstate Shellfish Sanitation Conference (the "ISSC") - a joint industry/federal/state government effort voluntarily instituted to administer and implement the National Shellfish Sanitation Program. Through the ISSC, the technical standards and administrative procedures for implementation of the National Shellfish Sanitation Program are adopted and agreed to by all participants. The ISSC members have adopted, and agreed to revisions and updates to, the Manual of Operations for the National Shellfish Sanitation Program. The U.S. Food and Drug Administration ("FDA") then annually evaluates each state's shellfish sanitation program for compliance with the criteria set forth in the Manual. Where minor non-compliance is documented, the states are obligated to develop and administer Action Plans to resolve such problems within a reasonable period of time under the oversight of the ISSC. Significant non-compliance problems, with immediate public health ramifications, result in a state program being classified as an "unresolved issue", and the state is

required to provide an immediate report on resolution of the issue to the ISSC. In the absence of a successful resolution of the issue, the Conference agreement authorizes all states to refuse to admit shellfish products from such non-complying state, and the FDA is also empowered to disapprove all shellfish shippers in such state from participation in interstate commerce.

As I have indicated, New York fully supports the cooperative partnership in shellfish sanitation established pursuant to the Interstate Shellfish Sanitation Conference. In light of this support, we would like to bring to the Subcommittee's attention some concerns we have about legislative proposals, as well as the current administration of the National Shellfish Sanitation Program by the FDA.

For the current program to be effective, states must be confident that FDA is providing timely, complete and consistent evaluations of state programs. Indeed, the entire integrity of the National Shellfish Sanitation Program depends upon this. However, New York and other states have significant concerns regarding tardy evaluations and strong perceptions that, despite recent improvements, FDA's evaluations of a given state are not consistent from region to region. New York has not received an evaluation from FDA in over three years. We are certainly confident that our program conforms to the requirements of the Manual of Operations. However, should the FDA document problems with our program, they will be much more difficult to resolve if they have gone unaddressed for several years, than had they been timely identified in annual evaluations. Moreover, we will continue to have questions about whether the specific standards and judgements applied in a single state's evaluation are similarly applied by other FDA staff around the country. We believe FDA should give higher priority to completing timely, objective and standardized evaluations to all states.

It would also be helpful for FDA to communicate more closely with states and provide more support to the states as the agency develops initiatives to improve shellfish sanitation programs nationally. The FDA's budget has been increased substantially in recent years to incorporate improved seafood safety programs. Much of this funding has been used to support important new initiatives that will benefit shellfish sanitation programs, including: the development of health standards for metals in seafood, particularly molluscan shellfish; surveillance of marine biotoxins in federal waters; research for the development of detection methodologies for pathogens and natural toxins; and the institution of training programs for state shellfish inspectors and microbiological laboratory operators. However, the FDA's plans for the implementation of these initiatives were developed without consultation with states and, not surprisingly, failed to provide any financial support for the improvement of state programs. Of even greater concern is that the single FDA program that provided direct and necessary assistance to New York's program -- the operation of the Northeast Technical Services Unit in Davisville, Rhode Island - received reduced funding. Over the years, this unit has been of great assistance to New York and other states in the region in providing training and specific technical advice on complex issues relating to growing area certification, design and operation of depuration facilities, and a variety of other issues. In the past two years very little support has been available from the unit due to lost capability.

With regard to legislation, we will not comment today on any specific bill that has been introduced in this or past sessions of Congress. Rather, we would like to offer the following suggestions as to what would be essential components of any federal seafood safety or inspection bill that relates to shellfish sanitation programs. First, we feel strongly that such legislation must specifically acknowledge that the lead responsibility and capability for administration of shellfish sanitation programs lies

with the states, and that the key federal role is providing technical and financial support to states, and in developing and administering programs to review and evaluate state performance. We are opposed to proposals that would authorize direct federal regulation of the classification of shellfish growing areas, or other preemption of state decisions made pursuant to the National Shellfish Sanitation Program. Federal seafood safety legislation should specifically recognize the role of the Interstate Shellfish Sanitation Conference and the process by which it operates and administers the National Shellfish Sanitation Program. Most importantly, such legislation should recognize that public health issues relating to the consumption of raw shellfish are by far the most significant public health concerns associated with seafood consumption, and that improvements must rely on the administration and delivery of the state shellfish sanitation programs. Therefore, if Congress determines that it is necessary to improve shellfish sanitation programs, the role of state shellfish sanitation programs should be recognized and considered the highest priority for increased federal funding associated with such legislation.

In the event that the Subcommittee wishes to address specific legislative initiatives, we would subsequently specific comments on such proposals. We look forward to continuing this dialogue on the important issue of shellfish sanitation programs and the nation's seafood safety concerns. Thank you again for providing us this opportunity.

New York State Department of Environmental Conservation
Building 40—SUNY, Stony Brook, New York 11790-2356



Thomas C. Jorling
Commissioner

October 21, 1993

The Honorable Thomas J. Manton
Chairman,
Subcommittee on Fisheries Management
U.S. House of Representatives
Room 1334, Longworth House Office Building
Washington, DC 20515-6230

Dear Congressman Manton:

As requested by your letter of September 27th, attached are responses to questions on seafood safety issues. I should emphasize that my agency's responsibility in this arena is limited to shellfish programs and, therefore, our responses focus only on shellfish related issues.

We very much appreciate the opportunity you have provided the Department to express its concerns about shellfish sanitation programs and the need for improving the federal support for the State's implementation of these programs. As always, we'd be happy to respond to any further questions or information needs you may have.

Sincerely yours,

Gordon C. Colvin
Director,
Division of Marine Resources

GCC:11

Attachment

Responses to Questions for Panel

On Seafood Safety

1. Do Voluntary seafood safety efforts work?

From the perspective of shellfish sanitation programs, it is imperative that State shellfish sanitation agencies conduct inspections of shellfish shippers and processors to assure their continuing compliance with the National Shellfish Sanitation Program Manual of Operations. We would not advocate shifting this present mandatory/regulatory inspection program to a voluntary program. At present, the FDA, in conjunction with the States, is working to standardize and upgrade State shellfish inspectors' capabilities and inspection programs nationally. This effort should continue and be concluded at the earliest time possible. A major residual concern will be the level of staffing in the individual states to assure the necessary frequency of individual inspections. This is one area of many in which federal financial support could make a contribution to improving the capability of the States' programs.

2. Can a voluntary safety program combined with consumer education be effective?

Again, from the perspective of shellfish sanitation programs, a mandatory, state conducted inspection program is imperative. However, there is no question that there are general benefits associated with increasing consumer awareness of seafood quality issues, and that a generally better educated consuming public will, in the long run, improve the quality of seafood available for sale.

3. As of 1991, only 1,200 processors of the 4,000 (or 1/4th) nationwide had participated in the HACCP instructional workshops. How has the seafood industry responded to the voluntary HACCP Program? Do you anticipate greater industry involvement even if the HACCP inspection plan is not mandated?

The Department does not have sufficient information with which to respond to this question.

4. Are discretionary State warnings to high-risk groups (e.g. those with liver diseases, gastrointestinal disorders, and AIDS) adequate to ensure safe consumption of seafood? Should retailers and restaurants be required to post warnings similar to those required for alcohol?

With respect to shellfish, the principal target of the types of warnings under discussion here are persons with compromised immune symptoms, liver disabilities or chronic respiratory conditions which render them more susceptible to significant medical complications resulting from consumption of shellfish containing marine vibrios, principally Vibrio vulnificus. In our opinion, nearly all such persons are or should be under the care of a physician. The single most effective way for such persons to receive advice about life threatening medical complications of consuming any food, including seafood, is from the health care provider. The single most effective way for government agencies to assure that such advice is received by these people is to use our limited resources to place this necessary information in the hands of physicians and the health care community, and urge that they communicate it to their patients.

Posting warnings in restaurant menus or retail establishments, as is done with respect to the effects of alcohol on pregnancy, will have an unnecessarily chilling and compromising affect on the sales of seafood to the

general public and is, frankly, not an effective way of reaching the very, very small percentage of the public who absolutely need to receive this message.

6. **Are there overlaps and redundancies among the various federal agency programs dealing with seafood safety that could be consolidated?**

With respect to shellfish sanitation, there is not a great deal of redundancy or overlap at the present time. From the perspective of the states it would be strongly hoped that, if federal legislation is enacted to improve the Nation's seafood safety programs, redundancy of such nature is avoided.

7. **Are imported seafood adequately inspected?**

There is some question in our minds and that of the ISSC about the adequacy of inspection of imported shellfish, particularly heat processed shellfish. Further, it is not yet mandatory that nations which export shellfish products to the U.S. are required to meet the same standards of growing area water quality as domestically produced shellfish, again, particularly when heat processed. It is the opinion of New York State that the same requirements should be applied to imported and domestic seafood.

We should also point out that New York's experience suggests inadequate inspection of imported shellfish by USFDA and the Customs Service at ports of entry. Our inspectors not infrequently discover and embargo shellfish from nations not approved to export to the U.S. These products should be intercepted by federal inspectors before entering commerce in the U.S.

8. **Do government regulatory programs focus equally on imported and domestic seafood products? Do we have a level playing field? [can] consumer choice be effective?**

See response to Question 7 above.

9. **How will the anticipated European Economic Community seafood standards affect the U.S. exporting seafood industry. Will these standards have any effect on the domestic seafood industry?**

We do not have sufficient information to respond to this question at this time.

10. **What changes in the Magnuson Act, if any, do we need to ensure consumers are guaranteed a plentiful supply of safe, wholesome sea food?**

It is not clear to us the changes to the Magnuson Act are necessary or will be helpful in addressing the seafood safety needs of the country. Rather, a continuation of the improvements to seafood safety programs of the FDA and NMFS that have already begun along with continued consideration of mandatory inspection programs will be essential. Again, what is most important in the case of shellfish is an assessment of the needs of the state programs and an increase in federal financial support to help address unmet needs in this area.

We are aware that, to date, the Magnuson Act has been used by the federal government as the statutory authority to prohibit the harvest of surf clams from the George's Bank area which are contaminated with paralytic shellfish poisoning toxin. This has been done because, incredibly, there is no legal authority for the federal government to declare federally-managed lands in the Exclusive Economic Zone as not approved for the harvest of molluscan shellfish

based on the public health considerations of the National Shellfish Sanitation Program (NSSP). Moreover, the federal government has not been held to the same standard as the states regarding the conduct of sanitary surveys, patrol of illegal harvest, etc. for such federally controlled shellfish producing areas. Clearly, the FDA should be authorized to close such areas and required to monitor and patrol them, consistent with the NSSP.

WP51:A
QUESSEAF

Comments on Seafood Safety Issues
for the
U.S. House of Representatives Subcommittee on Fisheries Management
by
Ken Gall, Seafood Specialist - New York Sea Grant
September 10, 1993 - Brooklyn, NY

Thank you for the opportunity to comment on the topic of seafood safety. I am the seafood technology specialist with New York Sea Grant which is a joint program of NOAA, Cornell University and the State University of New York. Sea Grant is a national network of university based programs in each of the coastal and Great Lakes states which seeks to stimulate wise use of our coastal resources through research and public education.

Seafood safety issues have received considerable attention in recent years and there is a considerable gap between public perceptions about seafood safety and the known, quantifiable risks associated with seafood consumption. This has been due in part to the way that seafood safety issues have been communicated to the public, the alarmist tone of some special interest groups concerned about seafood or environmental issues, misconceptions about food safety in general, and an overall lack of understanding about seafood products and the seafood marketplace among consumers. There is a need for an enhanced public education effort to communicate research based scientific information that will help consumers to develop a realistic understanding of seafood safety and to make rational decisions about their seafood selections and how individual risk can be minimized.

Considerable effort has been devoted to evaluating what is known about seafood safety, and there appears to be general consensus within the scientific and regulatory community with the conclusions reached by a special committee of the National Academy of Sciences convened to address this issue. In their 1990 report, Seafood Safety, this committee concluded that most seafood available to the public is wholesome and unlikely to cause illness. The FDA also recently reviewed seafood safety issues and has stated that the vast majority of seafood is safe to eat and that Americans can be confident that the fish they buy will provide a healthful meal. In fact, one FDA risk assessment estimated that the risk of food born illness may be at least 10 times less for seafood than for poultry, and that the risk of food born illness from properly cooked fish is even significantly lower.

While we can characterize the overall seafood supply as being generally safe, there are potential safety concerns just as there are for all other foods. For seafood, potential safety concerns are primarily associated with a few specific seafood products, specific harvest areas, or errors in industry or consumer food handling practices. In addition, there may be specific segments of the population, such as recreational anglers who may catch and consume large amounts of fish from contaminated waters, and individuals like the immunocompromised, who may be at increased risk because of their consumption practices or their individual health status.

The National Academy of Sciences Seafood committee made a number of recommendations that they believed would improve our current capability to manage specific seafood safety concerns. These recommendations identified specific changes in regulatory practices and policies, as well as research and education needs. I would like to focus on some of these recommendations related to research and education, as well as some key issues identified at Sea Grant's National Forum on Seafood Quality and Safety held earlier this year in Arlington, Virginia.

HACCP - The National Academy of Sciences, regulatory agencies and the seafood industry have all recognized that HACPP (Hazard Analysis Critical Control Point) is the preferred approach to enhancing seafood safety control. The seafood industry has worked extensively with government to develop a HACCP based system for seafood products, and HACCP models have been developed for the major seafood commodities and industry sectors. Pilot tests have been conducted for processors, retailers, and food service businesses. The seafood industry has been aggressive in evaluating HACCP and other approaches to enhance product quality and safety. Here in New York, Sea Grant, working

with New York's Seafood Council and the Seafood Retailers of NY, developed a voluntary quality improvement program that was tested in 20 Long Island retail stores. Two of these stores went on to represent independent retailers in the national pilot HACCP study conducted by the National Marine Fisheries Service and FDA, and successfully developed and implemented a HACCP plan. Other businesses, like smoked fish processors, are currently evaluating HACCP and are developing HACCP plans. Based on our experiences here in New York, it seems clear that HACCP can be effective, but there will be a need for industry education, training, and technical support. For most seafood businesses, developing, implementing, and operating under a HACCP system will require considerable time, effort and expense. Small businesses, which are a major part of the seafood industry here in New York and across the country, will need to have both time and help to successfully implement a HACCP plan. Technical support from programs like Sea Grant, which currently have a strong working relationship with the seafood industry, will be needed. However, because Sea Grant has received level funding for the past decade, it does not currently have the resources to provide much of the help that the seafood industry will need. While the Sea Grant network can easily be mobilized to meet this challenge, additional resources are clearly needed.

· Molluscan Shellfish - There is a need for basic and applied research on a variety of shellfish related safety issues. For example, new valid indicators for human pathogens in shellfish growing waters as well as improved laboratory and field methodologies to identify and quantify pathogens in shellfish and harvest waters need to be developed. Applied research is also needed to help the seafood industry develop processing procedures and other systems designed to eliminate potentially harmful microorganisms from shellfish and other seafood products. While considerable effort has been devoted to these issues and while there is a strong record of cooperation and collaboration between government, academia and the seafood industry, increased support of research by government laboratories, Sea Grant and other academic institutions is needed to adequately address these issues. There is also a need for an enhanced, objective public education effort that will help consumers understand current regulatory efforts like the National Shellfish Sanitation Program, and how to access local information on safety issues, proper handling methods, and approved areas and regulations for recreational molluscan shellfish harvesting. Consumers also need to understand the risks associated with consuming all raw foods including molluscan shellfish and how the general population can minimize risks. In addition, special education efforts in collaboration with the medical community that target individuals at increased risk from food borne illness are needed.

· Seafood Toxins - There is a need for research to develop the tools that the seafood industry needs to routinely monitor their products. For example rapid inexpensive field tests to measure finfish toxins like scombrototoxin and ciguatera and shellfish toxins are currently not available. Current laboratory procedures to test for these toxins are expensive and time consuming. It is not practical or economically feasible for the seafood industry to routinely test fresh seafood products for these toxins because of the cost and the time it takes to get test results. Research efforts underway at government laboratories, Sea Grant, and other academic institutions should be supported to develop practical rapid tests to objectively measure seafood safety and quality parameters. As these tools are developed, outreach efforts will then be needed to help the seafood industry use them properly and effectively.

· Seafood Education - There is an overall need for an enhanced public education effort focused on seafood products, nutrition and safety. Seafood is a unique commodity in terms of the wide variety of fish and shellfish species in the marketplace, its perishability, and the fact that it is widely harvested by individuals for their own consumption in significant amounts. The National Academy of Sciences seafood safety committee estimated that 20% of all fish and shellfish consumed in the U.S. comes from recreational fishing and this product is not subject to the same safety controls as the commercial seafood supply. Consumers need on-going access to objective research-based information to help them make informed decisions about their seafood consumption practices. They also need to know how to minimize potential safety risks that can be associated with fish and shellfish from the commercial seafood supply or that has been harvested by individuals for food and/or recreation. Because of the diversity of seafood products from one region of the

country to another and the fact that some potential safety concerns like contaminant health advisories are specific to individual states or local areas, educational efforts are needed at the local or grassroots level. National educational networks such as Sea Grant and Cooperative Extension have the expertise, but need additional resources to conduct the kind of educational effort needed to adequately meet these needs.

- Risk Comparisons - There is a need for realistic science-based information on the risks associated with seafood consumption in comparison to other foods. Both consumers and the seafood industry are frustrated and confused because information that would facilitate comparisons of food safety risks between one food and another is not readily available. Data is not collected on all foods in a manner that would facilitate the type of risk comparisons that can be readily utilized by consumers to make realistic decisions about their food choices. Government agencies have begun to recognize the need for greater collaboration and coordination, and these efforts need to be supported and encouraged.

- Seafood Consumption - There is also a need for comprehensive seafood consumption information. An integral part of the process used to evaluate risk involves estimating exposure, which in the case of food relates to the amount of a particular food that is eaten. Reliable estimates of regional consumption patterns and consumption patterns for specific population segments such as recreational harvesters and various ethnic, income, and other demographic groups is currently lacking. The National Marine Fisheries Service is planning to conduct a new seafood consumption study. This and other efforts are needed to gather reliable information that will allow us to accurately estimate consumption both for the commercial seafood supply as well as for recreationally caught fish and shellfish.

- Water Quality - Efforts to maintain and improve water quality in both the marine and fresh waters of the U.S. are crucial to the immediate and long term safety of our nation's and the world's seafood supply. The seafood industry carries a disproportionate burden of the impacts of environmental failures both in terms of real effects on fish and shellfish quality and public perceptions of seafood quality. Continued research and public education efforts designed to maintain and improve water quality in ocean, coastal, and fresh waters is needed and should be supported.



Sea Grant Extension Program *of the New York Sea Grant Institute*

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October 20, 1993

Honorable Thomas J. Manton, Chairman
Subcommittee on Fisheries Management
U.S. House of Representatives
Room 1334, Longworth House Office Building
Washington, D.C. 20515-6230

Dear Congressman Manton:

Thank you for the opportunity to participate in the recent subcommittee hearing on seafood safety held in Brooklyn, New York.

As you requested I am forwarding my written answers to the questions on seafood safety that you asked me to respond to for the record. I have sent my response to Lori Rosa, the Subcommittee Clerk and Legislative Assistant, and have also enclosed a copy for you with this letter.

Thank you again for this opportunity, and if the New York Sea Grant Program can be of assistance to you or the Subcommittee at any time please don't hesitate to call on us.

Sincerely,

Ken Gall

✓cc Lori Rosa
enclosure

SEAFOOD SAFETY PANEL QUESTIONS

for the

U.S. House of Representatives Subcommittee on Fisheries Management

Submitted by

Ken Gall, Seafood Specialist, New York Sea Grant

October 1993

Question: Do voluntary seafood safety efforts work?

Answer: When considering the merits of a voluntary versus a mandatory approach, it's important to clearly differentiate between concerns that directly impact the safety of seafood products and those that address product quality and product integrity or other marketplace or consumer issues that may be desirable to control but do not directly impact product safety.

Potential food safety problems must be prevented or controlled in order to ensure that products which can cause illness are not regularly entering the marketplace. A system that relies on voluntary compliance to standards or regulations that directly affect product safety is not likely to be practical for any food products. Adequate control of basic potential food safety concerns is currently mandatory, and existing regulations and Good Manufacturing Practices outline minimum requirements that everyone in the food production and handling system must meet.

Initiatives or programs (both government and private) that go beyond basic food safety and focus on quality enhancement or other guidelines or standards may more appropriately be voluntary. The advantages derived from participation in these programs must be weighed by individual businesses to determine if their participation is appropriate and beneficial. While many groups may feel that elements of these quality enhancement programs should be mandatory, they are distinctly different from programs specifically designed to ensure food safety.

Question: Can a voluntary safety program combined with consumer education be effective?

Answer: Consumer education should be an integral part of any comprehensive seafood safety program regardless of whether the approach is voluntary or mandatory. Even if a mandatory program is implemented that is so rigid that it virtually ensures that no mistakes will occur in the seafood harvesting, production, and delivery system, seafood safety problems will still occur if uneducated consumers make mistakes in handling, storing, and preparing seafood at home. For this reason responsible, proactive consumer education efforts are needed to ensure seafood safety.

Question: As of 1991, only 1200 processors of the 4000 processors nationwide had participated in the HACCP instructional workshops. How has the seafood industry responded to the voluntary HACCP program? Do you anticipate greater industry involvement even if the HACCP inspection plan is not mandated?

Answer: HACCP is a new system that requires individual businesses to commit a considerable amount of time and resources to learn about HACCP principles, to develop and write a working HACCP plan, and to implement and test their HACCP plan. In addition, the only HACCP based inspection program currently available is a voluntary fee-for-service program that has been available to the seafood industry for one year or less. When these factors are considered, the level of industry participation that has already occurred in my opinion is quite positive and encouraging, and demonstrates the seafood industry's overall interest in utilizing practical, state-of-the-art techniques to improve product safety and public perceptions about seafood.

It is difficult to project the level of industry involvement in the currently available HACCP based inspection program. Because much of the seafood industry is still composed of small businesses, commitments of financial and personnel resources may be factors that limit the level of voluntary participation in current fee-for-service

HACCP based programs. Marketing considerations (e.g. having the ability to advertise and inform potential customers about the advantages associated with products produced by participating businesses) are also likely to play a role and may stimulate a greater level of participation in voluntary programs in the future.

Question: Are discretionary state warnings to high-risk groups (e.g. those with liver diseases, gastrointestinal disorders, and AIDS) adequate to ensure safe consumption of seafood? Should retailers and restaurants be required to post warnings similar to those required for alcohol?

Answer: This issue relates to the potential severe complications that high-risk individuals may experience from a food born illness. These individuals need information to help them understand that the risks associated with the consumption of raw foods in general are significantly greater than those associated with properly cooked foods, and which foods that are commonly eaten raw, like bi-valve molluscan shellfish, should be avoided. It is most appropriate that the medical community be actively involved in counseling high risk patients to help them understand risks that may be associated with eating raw seafood as well as other raw foods. General seafood public education programs can also play a role in helping all consumers understand the potential risks associated with the consumption of raw seafood, and how to minimize individual risk. In fact, risks can be minimized for most of the population simply by cooking all seafood properly, especially bivalve molluscs like clams and oysters.

In my opinion, a comparison of potential public health risks associated with alcohol and seafood is not valid. The issues are so different that it would seem to be inappropriate to use alcohol warnings as a model to adequately address the potential risks that may be associated with the consumption of a specific type of food prepared in a specific way.

The potential severe negative economic impact that could occur because of misinterpretation of these warnings by the media and the public should also be carefully considered. Recent experiences have shown that consumers frequently generalize warning information about one seafood product to all seafood products. This is especially true for consumers who are less familiar with a variety of different seafood products or for those who lack confidence in their own ability to select and handle seafood properly.

Question: Should Federal seafood safety programs be consolidated into a single agency? Which agency and Why?

Answer: The National Sea Grant College Program is affiliated with the National Oceanic and Atmospheric Administration in the Department of Commerce, and I believe that it would be inappropriate for me to comment on the specific roles and responsibilities that should be assigned to any one Federal agency.

However, the basic concept of consolidation of regulatory responsibilities for all foods and for specific food commodities has been raised and has merit. Input on this debate may be more appropriately provided by other public groups and the private sector.

Question: Are there overlaps and redundancies among the various federal agency programs dealing with seafood safety that could be consolidated?

Answer: Again, I believe that it would be inappropriate for me to make specific comments or recommendations for changes in the existing roles and responsibilities of federal agencies.

The 1991 report on Seafood Safety developed by a special committee of the Institute of Medicine of the National Academy of Sciences provides a number of detailed recommendations for changes in regulatory programs at both the federal and state level that might be particularly useful to the Subcommittee.

Question: Are imported seafoods adequately inspected?

Answer: Without data on all of the monitoring and inspection activities for imported seafood, it is difficult to make specific comments on the adequacy of current efforts. Information on current inspection and monitoring efforts is likely to be available from agencies like FDA which have regulatory authority over imported seafood products. The 1991 National Academy of Sciences Report on Seafood Safety, however, did review this issue and identified a need to develop additional proactive strategies to enhance the safety of imported seafood products, and a need to address the variation in regulatory limits and inspection protocols that exist in various countries around the world. Additional support of such proactive efforts would seem warranted.

Question: Do government regulatory programs focus equally on imported and domestic seafood products? Do we have a level playing field? Can consumer choice be effective?

Answer: According to the most recent information available from the National Marine Fisheries Service (Fisheries of the U.S., 1992) imports accounted for 40 percent of the total U.S. supply of all fishery products. Five years ago (1988) the NMFS reported that imports accounted for approximately 51% of the total supply of fishery products. It would be appropriate and prudent both from a food safety viewpoint and to ensure a "level playing field" that government regulatory efforts be flexible and be adjusted as necessary to ensure that both imported and domestic seafood products are regulated in an equivalent manner and that all products conform to similar standards. Because of the dynamic nature of both the domestic and international marketplace, periodic evaluations of regulatory efforts may need to be made along with appropriate adjustments in effort needed to ensure uniformity and equivalency. Consumer choice can be effective when regulatory efforts are adjusted to reflect the realities of changing conditions in the marketplace.

Question: How will the anticipated European Economic Community seafood standards affect the U.S. seafood exporting industry? Will these standards have any effect on the domestic seafood industry?

Answer: New regulations developed by the EEC will require certification by a recognized government authority using an inspection system that meets EEC requirements for both the products and the establishments that produce them. It appears that HACCP is one system that can be effectively used to meet these requirements. U.S. seafood exporters will be affected because of the need to meet additional requirements when new EEC regulations are implemented.

The actions of the EEC appear to be an attempt to establish uniformity in standards and procedures for products that are imported from non-member countries. Overall, movements toward uniformity in requirements for products shipped from one country to another are likely to be positive. However, it is important to carefully evaluate the equivalency of these requirements, and determine whether new restrictive product safety and quality requirements may in effect become barriers to trade.

Uniformity in regulatory requirements could benefit both domestic producers and exporters. For example, businesses who operate under a HACCP system which is also approved by other countries would have greater flexibility in selling their products in both domestic and foreign markets.

Question: What changes in the Magnuson Act, if any, do we need to ensure consumers are guaranteed a plentiful supply of safe, wholesome seafood?

Answer: My area of expertise is food science and nutrition, and I do not feel that I am familiar enough with the specifics of the Magnuson Act to make recommendations for change. However, I do agree that the American consumer's interests need to be carefully considered in the fisheries management process to ensure sustainable access to safe and wholesome seafood at a fair and reasonable price.



NEW YORK'S SEAFOOD COUNCIL
Marine Resources & Products Council

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Comments on Seafood Safety Issues

as presented for the

**U.S. House of Representatives Subcommittee on Fisheries
 Management**

September 10, 1993

Roger C. Tollefsen - President New York's Seafood Council

New York's Seafood Council was founded in 1990 as the New York seafood industry's marketing and promotion organization. Its members include baymen, fishermen, lobstermen, wholesalers, shellfish dealers, processors, retailers, restaurants and party and charter boat operators. We welcome the opportunity to discuss issues of seafood safety, and would like to begin by making several clear statements that state our position.

1) Seafood is safe to eat and concerns about safety issues do not warrant a crisis approach to resolve them.

2) When seafood safety issues have been sensationalized as a crisis, the consumer has shied away from seafood products. Because of this, the consumer may be deprived of a nutritional and healthful food source which may result in creating an even greater overall personal risk.

3) Development of a comprehensive seafood regulatory-inspection program is a long term goal that has been supported by the seafood industry for years.

SEAFOOD IS SAFE

New York's Seafood Council does not off-handedly make the claim that seafood is safe. We offer repeated conclusions of professional organizations whose job it is to know and whose statements speak for themselves.

In its 1990 "Seafood Safety" report, the National Academy of Sciences concluded that most seafood available to the public is wholesome and unlikely to cause illness. The FDA has estimated the risk of food born illness may be at least 10 times less for seafood than for poultry; the risk of food born illness from properly cooked fish is even significantly lower. The FDA went further on to state that the vast majority of seafood is safe to eat and that Americans can be confident that the fish they buy will be a healthful meal.

The marine environment is the business place of the commercial seafood industry. The seafood industry has been a leader in encouraging action that improves water quality and the overall condition of our marine resources. Despite past problems, there are successes that should be acknowledged. Decades ago, contaminants such as PCBs and DDT were carelessly allowed to enter our

environment and spread to detectable limits in almost every food source from land or sea. Only recently have we even tested for these contaminants and recognized them as a problem; today, the introduction of these contaminants into the marine environment has been virtually eliminated.

One has to acknowledge that progress is being made and the fact that we are going in the right direction. However, we do not possess a magic wand that will make all past mistakes go away, nor do we have unlimited resources to squander without considering relative gains. Things really are getting better and will continue to do so as we learn to better understand man's impact on our environment.

MAKING SEAFOOD SAFETY A "CRISIS" WILL INCREASE PERSONAL RISK

Almost everything we eat puts us at some personal risk; but we must eat something! While the consumption of seafood has a proven record of healthful benefits, concern has been raised about potential contamination. As science gets better at detecting smaller and smaller levels of contaminants, it is possible to detect contaminants in almost everything, including seafood products. What is there to do and how do we assess personal risks relative to the need to eat? The consumer needs guidance through education to be able to understand the difference between the detection of a toxic substance and taking a controllable risk. Special interest groups should avoid tactics of using the scare of

detectable levels of contaminants that pose no significant risk as a means of discouraging the consumption of seafood.

Seafood affords so many positive nutritional benefits that they far out-weighed the demonstrated controllable risks of contaminants. If the consumer was driven away from eating seafood because of a perceived contamination risk, that consumer may very likely be actually increasing their relative risk due to consumption of other less healthful food groups.

SEAFOOD INSPECTION

Food inspection programs have traditionally been developed in response to a need such as an outbreak that affected public health. One of the reasons a more comprehensive seafood inspection program does not fully exist today is because seafood has been so relatively safe that there was little historical need for it. However, there are areas that can be improved, and the industry has worked hard to develop programs to deal with them. As recently as 1990, New York's Seafood Council undertook the first industry pilot demonstration program that incorporated principles of HACCP. HACCP, for Hazard Analysis Critical Control Point, is a type of process control. Twenty retail seafood stores and twenty commercial fishing vessels voluntarily participated in this program. Based on New York's involvement in this project, members of our council were invited to participate in a national program that helped develop current models. The seafood industry is leading the way in helping

develop and implementing this system which is superior to existing inspection programs in place in other parts of the food industry.

New York's Seafood Council supports the continuing development of an improved mandatory seafood regulatory-inspection program and agrees with the recommendations of National Fisheries Institute (the largest association representing the commercial seafood industry) as presented in a published statement entitled "Statement in Support of Improved Mandatory Seafood Inspection Program - April 1993"

CONCLUSION

New York's Seafood Council urges this subcommittee to recognize that the healthful and nutritional benefits of consuming seafood far out-weigh any negatives associated with it. It would be a disservice to the public if unsubstantiated "facts" were allow to confuse the consumer of a crisis in seafood safety and drive them to less desirable food sources that would create overall greater personal risks. We encourage this subcommittee to adopt a supportive role that logically and consistently works towards development of a seafood inspection plan which will undoubtedly serve as a model for the entire food industry.

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**TESTIMONY OF CAROLINE SMITH DEWAAL
DIRECTOR OF LEGAL AFFAIRS
PUBLIC VOICE FOR FOOD AND HEALTH POLICY
BEFORE THE HOUSE MERCHANT MARINE AND FISHERIES COMMITTEE
SUBCOMMITTEE ON FISHERIES MANAGEMENT**

Brooklyn, NY
September 10, 1993

Good morning, Chairman Manton, members of the Committee on Merchant Marine and Fisheries. My name is Caroline Smith DeWaal. I am Director of Legal Affairs for Public Voice for Food and Health Policy, a national non-profit research, education and advocacy organization that promotes a safe, nutritious and affordable food supply. We are pleased to have been invited to appear before the Committee today to address the acute gap in public health protections caused by inadequate state and federal seafood safety programs. Your leadership is very important in moving this issue to a resolution in the 103rd Congress.

Public Voice first called for a comprehensive mandatory seafood safety program in 1986 in its report "The Great American Fish Scandal: Health Risks Unchecked." In the intervening time, we have documented how federal and state programs fail to prevent contaminated seafood from reaching consumers tables, causing unnecessary illnesses and even deaths. We have been working closely with members of Congress over the past five years to develop and pass strong and comprehensive seafood safety legislation. Public Voice hopes that this subcommittee, Mr. Chairman, will work with us to promote strong pro-consumer legislation that can be signed into law by President Clinton.

Seafood is unique because it is the only commercially available flesh food harvested in the wild from an environment that may be polluted with sewage, pesticides and industrial chemicals. In addition, seafood can contain natural toxins that can cause illness and, in some instances, even death. Given the variety of potential risks and illnesses, it seems ironic that seafood is the only commonly consumed flesh food not subject to a comprehensive mandatory inspection program. Yet that is the case.

I am joined today by Nancy Longo, a member of CHEFS -- Chefs Helping to Enhance Food Safety -- a coalition of over 600 chefs and food professionals. She will share her experiences the personal and professional toll unsafe seafood has taken.

Contaminated Seafood is Reaching the Public

The safety of our seafood supply is an urgent problem. In the last two years, report after report has documented that contaminated seafood all too easily reaches consumers. From the National Academy of Sciences to *Consumer Reports*, the findings of naturally-occurring and environmental contaminants in seafood have been extensive. These problems result, in large part, from the failure of a patchwork of mostly voluntary federal and state programs to monitor and stop contaminated seafood.

As ongoing reports about unsafe seafood and the failure of government policies are brought to the public's attention, consumer confidence in the seafood will justifiably continue to decline despite its promise as a lower-fat alternative to other flesh foods. In 1992, in their annual national opinion poll, the Food Marketing Institute attributed a 10% decline in consumer confidence in the food supply to seafood safety concerns. Similarly, the 1992 Prevention Index reported a drop in

consumers who report eating seafood. They found that 27% of consumers say they eat fish twice a week, compared to 34% who did seven years ago. There is no sign that these trends are reversing.

At the June hearing of this Subcommittee, every industry and government witnesses quoted one line from the National Academy of Science report *Seafood Safety*: "Most seafoods available to the U.S. public are wholesome and unlikely to cause illness in the consumer." For consumers who have become seriously ill or who have lost a relative to contaminated seafood, this statement provides little comfort. Nor does the statement fully reflect the findings of the National Academy of Sciences report *Seafood Safety*, which documents the three major risks from seafood: microbial contamination, natural toxins and chemical contamination.

In the past year, numerous examples have emerged of contaminated seafood reaching consumers. Here are just a few:

- * In 1992, at least nine people died in Florida following consumption of raw oysters contaminated with *vibrio vulnificus* and I have heard as yet unconfirmed reports of over four *vibrio*-related deaths this year. This bacteria is common in the marine environment and can be fatal for individuals with certain conditions, such as alcoholism, liver disease, cancer, diabetes, kidney disease, AIDS, and blood disorders. Over two years ago, Public Voice wrote to Food and Drug Commissioner David Kessler urging him to put a mandatory warning label on raw molluscan shellfish to alert at-risk consumers of the danger to their health. FDA has never formally responded to our request.

- * Last June, it was disclosed that federal FDA inspectors allowed two million pounds of seafood, including 20 tons or more of contaminated seafood, to be imported into New York and New Jersey in the late 1980s and 1990. On June 17, following an investigation of the U.S. Customs Services into "ingrained pervasive corruption among inspectors and [food] importers," three former FDA inspectors pleaded guilty and another was indicted for accepting bribes. In a news conference disclosing the indictments, the United States Attorney for the District of N.J. said that the investigation found no "single scheme." Instead, he said, "this suggests the system wasn't working." These revelations followed upon a 1988 review of FDA's enforcement program for imported products by the Inspector General that found that FDA was inspecting only a small percentage of imported items. Moreover, some of the inspected items that were denied entry were not destroyed or reexported, as required, but rather found their way into the United States market.

- * In April and May 1992, there were at least 21 outbreaks of scombroid poisoning from fresh tuna involving a minimum of 79 illnesses in five states. The implicated tuna was primarily imported from Ecuador. According to a CDC memo, the FDA was aware of a problem with outbreaks from tuna as early as May 1 but the agency made no effort to alert consumers and waited until late May to formally alert the states. Only one of the five states with outbreaks issued a consumer alert.

- * FDA allowed a type of fish called escolar, that was known to cause severe diarrhea, to be sold in the Washington area until a physician at the National Institute of Health purchased the fish and personally experienced its side effects. According to a report in the Washington

Post in May 1992, the fish was only pulled from the market after the physician, who was concerned about the effects of the fish on children and the elderly, researched the scientific literature and notified the FDA. FDA then notified restaurant and seafood trade groups to notify their members to stop selling the fish, but according to the Post, some local grocery stores were never notified and continued to sell the product. (Nancy Longo will tell you how she learned of the effects from escolar that she served in her restaurant.)

* A February 1992 Consumer Reports investigation found "much fish unfit to eat." In tests of 113 samples of seafood from New York and Chicago, Consumer Reports found nearly 40% of the seafood was spoiled or near spoiled. Chemical contaminants were also in the seafood. Polychlorinated biphenyls (PCBs) were found in 43% of the salmon tested, 25% of the swordfish and 50% of the lake whitefish. Mercury was found in 90% of the swordfish. DDT and other banned pesticides were found in catfish, lake whitefish and swordfish. Lead was found in clams.

These examples represent just the tip of the iceberg. The Center for Disease Control reported at the June hearing of this Subcommittee that seafood illnesses accounted for 20 percent of all reported outbreaks of food poisoning and 5 percent of all outbreak-associated cases reported to CDC between 1973 and 1991.¹

These figures don't take into account the "victims that got away" -- those that aren't included because their illness was never reported to the CDC. There are significant barriers to reporting seafood-borne illness. For example, most illnesses that are primarily seafood-borne -- such as ciguatera, scombroid poisoning and *vibrio vulnificus* -- are not required to be reported to the CDC. And because of the unique nature of seafood-borne illnesses, doctors and hospitals often don't recognize them as being related to seafood consumption.² Finally, these figures don't take into account the hidden risks from the many chemicals that remain as residues in fish and may cause cancer and developmental disorders in infants and young children.

The examples cited above plainly illustrate the failure of current programs to prevent contaminated seafood from reaching consumers and causing acute or chronic food borne illness. Until Congress takes the needed leadership to establish a comprehensive mandatory seafood safety program to replace the existing patchwork of programs, unnecessary illnesses and deaths from contaminated seafood will continue.

¹ An outbreak represents two or more cases of illness for most seafood-borne illnesses. For ciguatera, scombroid and botulism, one case is considered an outbreak.

² The *New York Times* reported on Wednesday about a New York couple who contracted what the paper characterized as "a little known but increasingly common ailment called ciguatera fish poisoning." It took six months for the couple's illness to be diagnosed.

FDA's Announced (but not Proposed) New Mandatory HACCP Regulation

In March, at Public Voice's National Food Policy Conference, FDA Commissioner David Kessler admitted that "Illnesses do occur from seafood -- and most of them are preventable." He announced his intention to propose a federal regulation implementing mandatory HACCP for seafood processors. He said this would offer a "significant qualitative improvement over the current system." Public Voice welcomes this initiative and agrees that, subject to proper oversight and enforcement, HACCP might offer seafood consumers a safer product than is currently on the market.

Let's not be lulled into complacency however. In the six months since this announcement was made, FDA has not issued a notice of proposed rulemaking so that we may see if the program they are proposing truly will be an improvement. Further, although these proposed rules, if and when they become effective, may represent a positive step in improving the safety of seafood available to consumers, they do not eliminate the need for Congress to enact a comprehensive mandatory seafood program.

HACCP is not a health and safety regulatory program. It is a process control system that can be applied to virtually any type of manufacturing. The processing plant identifies points at which problems may arise and prevents the problems by controlling what happens at the points. Currently, the only mandatory regulatory application of HACCP to food manufacturing is FDA's program for low acid canned food. However, some food manufacturers have developed and implemented their own HACCP programs and the Commerce Department runs a voluntary HACCP program for seafood processors.

Before implementing HACCP for seafood, FDA should have the following in place:

1. Empirical evidence that the application of the FDA's HACCP system will result in cleaner, safer seafood that is less likely to cause either acute or chronic foodborne illness.
2. Standards and guidelines stringent enough to reduce the likelihood of foodborne illness.
3. Data to demonstrate that the visual and physical tests applied in monitoring and verification are accurate and adequate to improve food safety.
4. Public availability of all plant HACCP plans and records relating to the HACCP plan and all actions taken by federal inspectors to enforce safety in the plants.

Even if the perfect HACCP system is developed and implemented by FDA, however, this will not eliminate the need for strengthening the underlying regulatory framework. For example, FDA currently lacks the enforcement and oversight capability to:

- * Close down processing plants that are not operating in compliance with FDA's rules.

- * Close down polluted harvesting waters.
- * Regulate boats used to harvest seafood.
- * Regulate trucks used to transport seafood.

In addition to strengthening FDA's regulatory framework and establishing stronger enforcement mechanisms, statistically valid sampling programs need to be undertaken and standards for chemical contaminants that are protective of sensitive groups, such as pregnant women and children, need to be established.

Legislation is Still Needed

To correct the inadequacies in FDA's existing authority and to provide the wrap-around regulatory program necessary for a HACCP program to work effectively, Congress needs to enact comprehensive mandatory seafood safety legislation. FDA has never had the authority or funding necessary to adequately regulate a product like seafood that is associated with a myriad of public health risks. Congressional action is necessary to correct this situation and to assure that consumers are adequately protected from unsafe seafood.

Public Voice considers the following elements critical to a public health based program. Even with HACCP, the continuing absence of any of these elements creates a gap in public health protections:

A. Comprehensive Inspection Authority

HACCP can only function effectively if it is used as one component within a larger regulatory framework. For seafood, this framework must extend from the water to the table. FDA needs additional inspection and oversight authority in the following areas to accomplish its mission of assuring the safety of the seafood supply.

1. Monitoring and Closure of Fishing Grounds and Harvesting Waters

To help identify "hot spots" for ciguatera toxins and chemical contaminants, fishing grounds must be monitored and samples of seafood from those waters must be taken. If a significant health risk is discovered, the waters should be closed to commercial and recreational fishers alike. Species restrictions can also be used to address specific health risks, such as chemical contaminants that tend to biomagnify in larger species.

Shellfish harvesting waters should be monitored and classified according to their suitability for harvesting. If certain areas are found to present a significant health risk, they must be closed to harvesting for as long as that risk persists to assure that consumer health is not jeopardized.

2. Inspections of Domestic and Foreign Processing Facilities

Frequent, unannounced inspections of domestic seafood processing facilities by federal inspectors can help prevent illnesses related to processing and handling. Domestic facilities that process fish products should be registered and subject to random inspection and sampling. Imported fish products should be inspected and sampled at the port of entry and foreign processing plants should be subject to random inspection to ensure that they meet national standards. While periodic inspections and sampling alone will not eliminate the risk of seafood-borne illness entirely, they will aid in the detection of food safety violations which lead to contaminated seafood reaching the market.

3. Regulation of Imported Seafood

Over half of all seafood consumed in the United States is imported. Yet, these imports are subject to only minimal inspection at the port of entry. The inadequacy of this system was clearly demonstrated by the outbreaks of scombroid fish poisoning that occurred in five states in May 1992 and by the indictments in June 1992 of several FDA inspectors who allowed at least 20 tons of contaminated seafood to be imported into the U.S. These examples demonstrate the urgent need for more rigorous import control.

The establishment of a certification program for foreign countries would meet this objective. Foreign nations exporting fish products that meet U.S. standards and who consent to random sampling and on-site inspections should be certified to export their products to the United States. Products from these countries can be monitored upon their arrival to the U.S. Countries that are not certified may still be permitted access to U.S. markets, but their fish products must be subject to intense scrutiny upon arrival.

4. Safe Handling Standards for Fishing Vessels

One critical measure needed to stem the occurrence of seafood-borne illnesses like scombroid fish poisoning is the standardization of safe handling procedures aboard fishing vessels. Standards for fishing vessels are essential to minimize the potential risk to consumers from scombroid poisoning and other illnesses caused by mishandling. If vessels were required to carry fresh water for hand-washing, make-shift toilet facilities and freezers for storing fish, contaminants that cause seafood-borne illnesses such as scombroid poisoning could be thwarted at their onset. To ensure that basic health measures such as those above are implemented, enforcement of these standards through unannounced inspections of fishing vessels is essential.

5. Public Health Surveillance Program

Greater emphasis must be placed on the reporting and collection of seafood-borne illness data. Currently, the CDC does not require the reporting of most seafood-borne illnesses and many state health departments adopt similar guidelines. A more thorough reporting system will make it possible for officials to more accurately assess risk from seafood-borne illnesses, develop strategies and policies to reduce risk and pinpoint areas where improvement of the inspection program is necessary.

B. Tolerances for Contaminants

Despite the fact that since 1938 FDA has had authority to set formal tolerances to limit the level of contaminants in seafood offered for sale, the agency has set only one. Many potentially harmful chemicals common in seafood, such as mercury, dioxin, and DDT, do not have formal tolerances. Under present law, FDA must go through formal rulemaking proceedings -- similar to a courtroom trial -- in order to set tolerances. To avoid the time and expense associated with formal rulemaking, FDA has used 16 informal "action levels" for seafood, which serve notice on industry of the level of contamination the FDA will accept. These action levels do not have the force of law, are set without any public notice or opportunity to comment, and may not be challenged by consumers, even if they are wholly inadequate.

Legislation should provide FDA with a formal mandate and deadlines to assure that the agency will set chemical and microbial tolerances to limit the contaminants in seafood. In addition, these provisions should allow FDA to employ the much more streamlined informal rulemaking procedures of the Administrative Procedures Act, which guarantee industry and the public alike full participation in a notice and comment rulemaking, and assures both groups the availability of judicial review.

Legislation should assure that environmental contaminants in seafood are subject to the same level of regulation as food additives. Otherwise, consumers will be at risk as chemicals common in seafood that are known to cause chronic effects in humans, such as methylmercury and PCB's, may go unregulated.

Also, legislation should assure that FDA will not base tolerances solely on what is safe for the average adult male, as it has done in the past. Tolerance setting should include consideration of the special sensitivities or special consumption patterns of subpopulations, such as children, pregnant women, women of childbearing age and the elderly, as well as recreational fisherman. Where a tolerance cannot be established that is safe for all consumers, FDA should provide public notice and appropriate warning of the potential risk to those consumers unprotected by the tolerance.

C. Sampling

Extensive tissue sampling is critical for identifying microbiological contamination, and is the only method available to disclose chemical contaminants in seafood. Yet, FDA's sampling program is highly inadequate. The most recent baseline survey of chemical contaminants in seafood was conducted in the 1970's by Tom Billy, the present Director of FDA's Office of Seafood. We believe that because of changes in environmental conditions, this survey no longer accurately reflects the presence of chemical contaminants in seafood.

FDA sampling of seafood is totally insufficient. FDA has recently claimed that the agency has doubled its sampling of seafood for the presence of chemical contaminants. An examination of the data shows that the number of samples has nearly doubled, from 1000 to over 2000 samples of seafood analyzed per year. When the National Academy of Science collected data for its report, the Academy found that of the 3.8 billion lbs of seafood consumed in 1989, FDA took a total of only

7,652 samples, including both domestic and imported samples analyzed for both biological contaminants and chemical contaminants. This represented one sample for every 250 tons of seafood consumed.

Tom Billy testified at the June hearing that FDA rarely detects chemical contaminants at levels of concern in commercial species. This is hardly surprising since the National Academy of Sciences found that several of FDA's "levels of concern" were too high to be protective of major groups such as women and children.³ If tolerances were lowered to reflect the risk to these vulnerable subgroups, FDA would likely find chemicals at high levels of concerns.

FDA's sampling results are actually not as clear cut as Mr. Billy portrayed in his June testimony. In a recent presentation at FDA's conference on chemical contaminants, an FDA scientist reported the following findings: For tuna, FDA found a high incidence of DDC and mercury, lead levels were "too high", and a 100% incidence of cadmium; for swordfish and shark, FDA found violation rates of 25% for mercury. Because FDA fails to conduct periodic surveys to determine the extent and source of contaminated seafood, the agency doesn't know whether its findings are representative of all seafood entering commercial channels.

A comprehensive seafood safety program should provide for periodic statistically valid sampling consistent with the amount and variety of seafood consumed in this country and the pervasiveness of seafood contamination. In order to cut down on some of the expense of such a sampling program, Congress should appropriate funds for FDA to do another baseline study of chemical contaminants in seafood. Once this was performed, targeted sampling could be conducted of problem species from problem areas.

D. Enforcement

FDA's enforcement authority is clearly inadequate. Even Commissioner Kessler has recognized these limitations. In his remarks before the National Food Policy Conference in March, he said:

"The history of food safety regulation is filled with government watchdogs chasing the horses after they've left the barn. The current system places far too much of the burden on the taxpayer to find the problems.

"And the FDA's enforcement tools are so rudimentary as to make the burden overwhelming at times.

"If there is an adulterated product being shipped, FDA is not even entitled to the records to tell where that product has gone."

³ In *Seafood Safety*, the NAS analyzed FDA's standard setting procedures for PCB and methylmercury, and in each case found that the standards were not fully protective of consumers. In the case of methylmercury, the NAS recommended that for tuna products targeted for babies and young children, "much lower levels (than FDA's permissible level) of mercury should be maintained." *Seafood Safety*, p. 329.

To remedy this inadequacy and assure that contaminated seafood can be removed from the market, seafood safety legislation must include:

- * Recall authority to stop contaminated seafood from reaching consumers.
- * Subpoena authority to allow the FDA to obtain documents and testimony from possible violators of the Act.
- * The application of civil penalties without a court hearing. (This is similar to authority granted to the EPA to enforce the Clean Air Act.)
- * Whistleblower protection to assure that there are adequate checks and balances built into the HACCP program.
- * Agency and public access to all plant inspection records related to public health.
- * Publication of the names of violators in the Federal Register.

E. Role of the Interstate Shellfish Sanitation Conference

In the decade leading up to 1987, the toxins and microbial contaminants present in shellfish accounted for 66% of all seafood-borne cases reported to the Center for Disease Control. Nonetheless, the monitoring and inspection of shellfish harvesting remains voluntary, conducted on a state-by-state basis with only a limited federal role.

As the recent deaths in Florida clearly demonstrate, the public health is not adequately protected by the existing patchwork of regulatory programs. State agencies have been shown to fall prey to commercial and political pressures, delaying or avoiding the closure of harvesting waters despite evidence of harmful contamination. This problem was amply demonstrated in 1991 when Louisiana delayed closing their harvesting waters for weeks after the FDA issued an advisory urging the states to do so.

In the spring of 1991, torrential rains hits the states along the Gulf of Mexico and they experienced severe flooding. The FDA recommended that states conduct a precautionary closing of their oyster beds. The oysters were at high risk of contamination from fecal coliform runoff, and the deluge of fresh water itself would likely cause the oysters to become "stressed" and die. Every state but Louisiana, the state which produces almost half the country's supply of oysters, complied with the recommendation. Louisiana initially prepared to close the oyster beds, but a state politician intervened, and the plans for an emergency closure were cancelled. Although Louisiana did ultimately close the beds, it was only after the FDA renewed its pressure by sending the state letters threatening enforcement action. The Louisiana oyster beds stayed open for several weeks after FDA's initial recommendation and the potential existed for a serious public health problem.

A mandatory shellfish safety program is needed to ensure that consumer health remains a priority in emergency situations. Improvements to the National Shellfish Program should establish mandatory standards and procedures for the growing, harvesting, handling, processing, and shipment

of bivalve mollusks to assure a safer shellfish supply and provide for federal enforcement of those standards.

Once shellfish is harvested, it should only be shipped and processed by groups certified for their compliance with federal standards. The public will be assured that a product is in compliance with this certification through an official mark displayed on the shellfish product.

Shellfish handlers and processors should be registered so that health officials can better trace contaminated shellfish through the channels of distribution and halt unsafe practices at their source.

Finally, the industry should be prohibited from participating in setting governmental policy other than in a manner consistent with the Administrative Procedures Act, as it is currently allowed to do in the Interstate Shellfish Sanitation Conference.

Conclusion

Without congressional action, the safety of the nation's seafood supply will continue to be compromised and consumers will be needlessly exposed to health hazards from chemical and microbiological contaminants and natural toxins. The absence of a comprehensive mandatory seafood safety program and adequate funding is not only hazardous for consumers, but promises to undermine the health of the seafood industry as well.

Seafood safety is hardly a new issue for the Congress. Back in 1990, in the 101st Congress, there was full Congressional debate and seafood bills passed each house. Since that time there has been expanded documentation by the National Academy of Sciences and others detailing the pervasiveness of seafood contamination. Last session, Senators Hollings, Leahy, Kennedy, Cohen and Stevens, and Majority Leader Mitchell provided important leadership in developing and introducing legislation. However, a combination of forces prevented the legislation from full Senate consideration, including Bush administration opposition and a counterproductive push by seafood industry lobbyists for a weak program that would provide a federal seal of approval without adequate public health protections.

At your hearing in June, Energy and Commerce Committee Chairman John Dingell said that this session he is ready, willing and able to proceed with omnibus seafood safety legislation, saying that we "must have a strong comprehensive seafood safety program." Passage of seafood safety legislation in this session would be a win for Congress, a win for the Clinton administration, a win for the industry and a win for consumers. Action by your committee to move this issue forward will help to reduce the risks from uninspected, contaminated seafood, prevent unnecessary illnesses, and save American lives.

Appendix - ~~De~~ *De* ~~Waal~~ *Waal* Statement

APPENDIX TO DEWAAL STATEMENT

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Mercury and Fish: A Disquieting New Study

By DANIEL P. PUZO
TIMES STAFF WRITER

Illegal levels of methyl mercury, a toxic metal that poses special health risks to infants, children and pregnant women, was found in one in five samples of commercially caught swordfish and shark in a three-year review by the U.S. Food and Drug Administration.

The findings prompted a special year-long review by the FDA in 1992; the results are pending.

Methyl mercury, like lead, is found throughout the environment. Once consumed, the heavy metal can accumulate in the tissue of fish, animals and humans. At elevated levels, poisoning can occur. Fetuses exposed to elevated mercury levels can suffer from mental retardation, lack of physical development and seizures. In adults, the symptoms include sensory damage, skin abnormalities and lack of motor skills. Highly elevated levels can cause death.

Seafood is the single largest dietary source of methyl mercury. Because shark and swordfish are at the top of the ocean's food chain and regularly consume smaller fish that contain mercury, they tend to have higher concentrations of the metal than other fish.

FDA laboratories are currently analyzing 200 samples of imported and domestic shark and 200 samples of imported and domestic swordfish. Each sample is a composite of an entire shipment—or lot—and contains fish of various sizes in order to achieve a representative mix. These results have yet to be released.

However, as much as twenty-six percent of samples tested as recently as 1989 exceeded the allowable level of one part per million of methyl mercury.

"Anytime we see a 15% to 25% violation range, we don't like it," says John Jones, FDA's strategic manager of pesticide and chemical contaminants.

What's more, if the tests had used the more conservative Canadian standard (Canada allows only 0.5 ppm of mercury in seafood), none of the shark and swordfish sampled by FDA would have passed (all exceeded 0.8 ppm).

Public Voice for Food & Health

Policy, a Washington-based consumer group, petitioned the FDA more than a year ago to lower the amount of mercury permitted in seafood.

"Basically, FDA has failed in its duty to protect sensitive groups such as pregnant women and children from the adverse effects of methyl mercury," says Caroline Smith DeWaal, a Public Voice attorney. "They have numbers and data that they can use to set more protective standards and they are failing to act."

Smith DeWaal says that when the FDA established the current one ppm limit, it considered what may cause mercury poisoning in adult males, not fetuses, infants or children. (Many environmentalists point out that the government's allowable pesticide levels in food similarly do not take into account infants' and children's heightened sensitivity to toxic chemicals.)

Tom Billy, director of FDA's Office of Seafood, says the agency has reviewed all the scientific literature on methyl mercury and will shortly begin the regulatory process that may pave the way for reductions in the allowable levels of the toxin in fish.

"We take this issue seriously and we are addressing it," he says.

Yet an authoritative study by the National Academy of Sciences in 1991 concluded that the FDA "lags badly in the development of innovative methodology for assessing risks [from compounds such as methyl mercury]." The academy also noted that the FDA was "most conspicuously backward" in determining the threat from non-carcinogenic compounds such as mercury.

Billy says that since the National Academy of Sciences report was released, the FDA has worked with the Environmental Protection Agency to improve its risk assessment capabilities. One such effort is a major study of methyl mercury's effects on mothers and young children with high seafood consumption rates. The study, expected to be concluded later this year, is being conducted on the Seychelles Islands in the Indian Ocean.

Despite the concerns about methyl mercury in fish, the FDA says the detectable levels have

remained the same throughout this century and are not on the rise. Billy says that in the early '70s, when methyl mercury was recognized as a serious contaminant in canned tuna, the Smithsonian Institution provided data indicating that mercury levels in tuna were the same as in the 1800s.

Although canned tuna has only one-tenth the levels being found in fresh swordfish and shark, the greatest source of methyl mercury in the diet may still be from canned tuna. Even so, FDA officials say that recent measures enacted by the seafood industry have resulted in reduction of mercury levels in tuna. The practice of dolphin-friendly tuna fishing has inadvertently resulted in a shift in the target catch from species with high mercury levels to those with lower concentrations.

Billy adds that regular laboratory testing by domestic processors and seafood importers can also play a role in reducing the number of fish with elevated methyl mercury levels that enter the commercial food chain.

Not every group feels that increased testing is necessary. The National Fisheries Institute, a seafood industry trade group, takes the position that all the available scientific literature indicates mercury levels in fish do not pose a hazard. "People who are at risk for mercury should limit or restrict their consumption of certain fish—such as swordfish and shark—to once a month," says Clare Vanderbeek, vice president of the trade group. "In any event, it would be unique for someone to eat shark or swordfish much more than that since present consumption rates indicate the typical consumer is eating seafood about twice a month."

Vanderbeek also says that the Fisheries Institute opposes any reduction in the federal government's allowable levels of mercury in seafood.

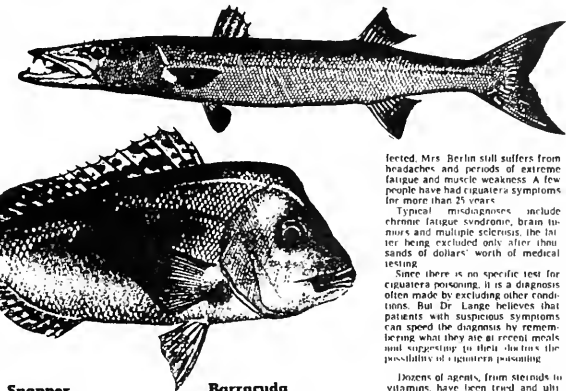
"In 20 years of attention to this issue, there is no indication of a health problem," she says. "There is no evidence that warrants lowering the one ppm level [of mercury allowed in seafood]. And if there were such evidence then we would be the first ones to request a reduction."

THE NEW YORK TIMES, WEDNESDAY, SEPTEMBER 8, 1993

An Insidious Poison Lurks in Some Fish

By JANE E. BRODY

It seems terribly unfair when people are careful to select health-promoting foods and then get sick from eating them. That was the fate of a Massachusetts couple, Dr. and Mrs. Richard Berlin of Pittsfield, who became mysteriously ill after dining on red snapper while vacationing in South Florida. It took six months and numerous



Snapper

Above: Large red snappers in South Florida are ciguatera carriers.

Barracuda

Top: More than a third of South Florida barracuda are contaminated.

visits to the doctor before the true cause of their strange symptoms was uncovered through persistent sleuthing by the ill physician.

Dr. Berlin, a psychiatrist, eventually discovered that they were suffering from a little-known but increasingly common ailment called ciguatera fish poisoning, caused by a toxin for which there is neither a diagnostic test nor a cure. The Berlins had thus joined countless other travelers to the tropics and semitropics, along with residents, who have been poisoned by ciguatera. The toxin is found in fish that feed on coral reefs and in predatory fish that eat the reef feeders.

The relative handful of medical researchers who have become experts on ciguatera fish poisoning are eager to get the word out to other doctors who may encounter patients with the confusing and often frightening array of ciguatera symptoms and to consumers who may be able to avoid the illness or recognize it soon enough to benefit from the only treatment known to reduce its severity.

A Major Cause of Illness

Dr. W. Robert Lange of Johns Hopkins Hospital in Baltimore, an expert who discussed the problem recently in the Archives of Internal Medicine, described ciguatera as the most common seafood-related illness. He said it accounted for more than half the fish-related cases of food poisoning in the United States, where it is almost as common an illness among travelers as infectious hepatitis.

Another expert, Dr. Irwin J. Schatz of the University of Hawaii, pointed out: "In this era of intercontinental jet aircraft, our widely traveled patients may present with typical symptoms of ciguatera poisoning almost as readily in San Francisco, Minneapolis or Boston as in St. Thomas, Miami or Honolulu."

On certain tourist-attracting atolls in the South Pacific, he said, 10 percent to 70 percent of local people have suffered ciguatera poisoning. He said the increased shipping of fish from tropical waters for retail and restaurant use elsewhere "can only be expected to make the disorder more widespread and more common."

Despite its obscurity, ciguatera poisoning is hardly a new problem, illness resembling it was known in ancient Egypt. It was first "officially" described by Spanish explorers to Cuba in the 1500's and later by Captain James Cook, who encountered it in the South Pacific in the 1700's. In 1789 it nearly killed Captain Bligh and the Bounty's physician, among others in the crew, after the famous mutiny.

The name ciguatera (pronounced si-gwa-TEH-ah) came from an incorrect assumption that it was caused by a small sea snail that the Spanish called cigua.

Actually, ciguatera is produced by a single-celled, free-swimming dinoflagellate, the microscopic Gaillardetia, which attaches itself to

coral, which attaches itself to marine algae growing on coral reefs. It is consumed by small herbivorous reef fish as they eat the algae. These reef fish are eaten by larger carnivorous fish, and the fat-soluble toxin becomes more and more concentrated as it passes up the food chain.

In South Florida the typical culprits are large specimens of grouper and red snapper and especially barracuda, more than a third of which are contaminated with ciguatera. Dade County, Fla., which includes Miami, has banned the sale of barracuda, which nonetheless often gets sold at dockside to unsuspecting buyers who are told it is something else. In 1986, Dr. Lange recalled, an outbreak of ciguatera poisoning occurred in Vermont after several restaurants served barracuda shipped from a Florida distributor.

In Hawaii, the most common culprit is amberjack and throughout the Pacific, red snapper is the typical cause. Other common sources of ciguatera poisoning include surgeonfish, horse-eye jack, crevalle jack, bar jack, hogfish, dog snapper, sea bass and king mackerel. A major problem in avoiding potentially toxic species is that a given fish may be called by various names, and most people cannot tell one fish from another by looking at it.

Complicating matters is the fact that ciguatera is only sometimes present. There are periodic "blooms" of the dinoflagellate that are believed to be touched off by damage to coral reefs, for example from ships that run aground, dredging operations and sea-churning storms.

Only when the toxin reaches a certain concentration in fish is it likely to produce illness in human consumers. Thus, Dr. Donna Blythe, a ciguatera expert from Coral Gables, Fla., notes that smaller specimens of the typical culprit fish rarely cause the poisoning, which is associated only with saltwater fish.

While biochemists in three states are now trying to perfect a quick, inexpensive, simple test for ciguatera, there is currently no commercially available way to tell if fish are contaminated before they are sold. The fat-soluble toxin is not destroyed by cooking, freezing, smoking, drying, water-soaking or marinating contaminated fish. Nonetheless, according to Dr. Lange, who has provided

expert testimony in many cases, growing numbers of ciguatera victims are bringing lawsuits against restaurants and fish vendors.

Symptoms of Illness

Typically, symptoms of ciguatera fish poisoning start within a few hours of consuming contaminated fish but, just to confuse matters, may begin as long as a day or more later. Gastrointestinal distress, namely nausea, vomiting, watery diarrhea and abdominal cramps, usually come first, followed or accompanied by neurological symptoms that may include numbness and tingling of the lips, tongue and throat, then the fingers and toes. Those more severely affected often experience a reversal of hot-and-cold sensations, so that an ice cube feels burning hot and fire feels ice cold.

Other symptoms may include weakness, dizziness, dry mouth, aches in muscles and joints, sharp shooting pains in the arms and legs and a sensation that one's teeth are loose. Vision may become blurred or distorted, the skin may itch and the heart rhythm may become abnormally slow. Low blood pressure, difficulty breathing and debilitating emotional depression are also common.

In pregnant women, the toxin can cross the placenta and result in bizarre fetal movements and, after delivery, facial palsies in newborns. Dr. Lange described two cases in which ciguatera seemed to have been transmitted sexually by men with genital-urinary symptoms to their wives, who developed severe pain deep in the pelvis.

A particularly characteristic sign of ciguatera poisoning is that alcoholic beverages worsen the symptoms. So may vigorous physical exercise, particularly in hot weather, and sexual activity. As long as six months after recovery, these triggers, as well as eating nuts and fish and shellfish that are not contaminated with ciguatera, can cause a recurrence of symptoms. And once a person has had ciguatera poisoning, subsequent encounters with the toxin can result in ever-worsening but very rarely fatal illness.

Although most people recover on their own within one or two months, in some people symptoms persist for many months or years. Two and a half years after the Berlins were in

ferred, Mrs. Berlin still suffers from headaches and periods of extreme fatigue and muscle weakness. A few people have had ciguatera symptoms for more than 25 years.

Typical misdiagnoses include chronic fatigue syndrome, brain tumors and multiple sclerosis. The latter being excluded only after thousands of dollars' worth of medical testing.

Since there is no specific test for ciguatera poisoning, it is a diagnosis often made by excluding other conditions. But Dr. Lange believes that patients with suspicious symptoms can speed the diagnosis by remembering what they ate in recent meals and comparing to their doctor the possibility of a ciguatera poisoning.

Dozens of agents, from steroids to vitamins, have been tried and ultimately found wanting in treating ciguatera poisoning. But the relatively recent discovery of how the toxin probably causes its diverse effects has led to at least one remedy that is effective if, and only if, it is used within the first 48 hours after the toxin is consumed.

Now known to open the channels that allow sodium to pass in and out of cells, resulting in a disruption of the electrical activity and permeability of the cells, these channels are widespread in nerve and muscle tissue and derangement of their function can interfere with a host of normal biochemical, neurological and muscular activities.

Dr. Blythe, Dr. Lange and others now treat newly developed cases of ciguatera poisoning with large intravenous doses of a complex sugar called mannitol, which counters the effects of the toxin on sodium channels. Mannitol treatments, if started soon enough, can greatly reduce the severity and duration of symptoms, the doctors said.

But those with chronic symptoms do not benefit from mannitol therapy. Dr. Lange has found the anti-depressant medications Trazolam and Prozac to be helpful to many patients with chronic ciguatera, both medications may work because they modify sodium channels.

Among 22 cases he analyzed, Dr. Lange said the three patients who were scuba divers were the only ones who recovered quickly, suggesting that treatment in a hyperbaric chamber might shorten the syndrome if it is given soon enough. This therapy has not yet been tried.

But he insists that prevention is the most effective way to deal with ciguatera. In highly endemic areas, he recommends that travelers and residents avoid eating grouper, red snapper and any kind of fish dish that contains unspecified kinds of fish. In addition, he said, "Everyone everywhere should avoid eating barracuda." Also, avoid eating the liver of fish, where the toxin concentrates.

Dr. Blythe suggests that grouper and red snapper under five pounds and hogfish under two pounds would be all right to eat. But she prefers that consumers choose yellowtail snapper and mahi mahi, which she said "are safe fish" to eat in South Florida and the Caribbean. When dining on a whole fish, a headless one that lies on a dinner plate would be safe to eat, she said.

To speed diagnosis and proper treatment, Dr. Blythe maintains a special ciguatera telephone line: (305) 361-6616 or (305) 661-0774. She urges that in case of doubt, delay when they suspect a fish poisoning.

SHELL SHOCK



CURTIS MORGAN

He felt it hit instantly. Not hard really, more like a switch clicking on inside his body.

It was 2 o'clock on a hot August Monday. Claude Boynton sat down at the soft drink distributorship he owns in Miami, wondering about the sudden chills prickling his spine.

At 54, he had his share of health problems.

He smoked and drank, was a bit heavy and had mild diabetes. His liver bore watching and a cardiologist had begun treating him for stress. Still, he was big, strong and active. He figured he had a little bug.

He did. A very bad little bug.

Boynton drove to his Weston home. Three hours later when his wife, Kathleen, found him nearly delirious, his temperature had soared to 106. That night, his legs burned fiercely. Then they ballooned. Pink blotches appeared on his feet. Early the next morning, his wife rushed him to the Cleveland Clinic. The blotches had marched up and over his knees and darkened to a purplish-blue. Soon they would turn ulcerous black. Kathleen was horrified. Whatever it was, it was destroying him so quickly she could watch it work. Underneath his skin, something alive seemed to pulse.

"It was like Pac Man going up . . . chomp chomp chomp. I saw it. I saw it happening."

Doctors, frantically pumping in antibiotics, halted the spread a hand span from his groin. Later, one would tell Kathleen her husband had been two hours from death. For the next two months, they tried to save his legs.

"His legs were huge. They were out to here," says Kathleen, holding her hands far apart enough to engirdle a watermelon. "The blisters . . . black, just black. If he lifted

his leg, all that stuff on the inside was shaking."

Surgeons cut away decaying skin and flesh. They sliced healthy patches from his thighs to sheath the skinless lower regions. Today, Boynton still has both legs, but they look like a shark gnawed them. Even a stroll is painful. He can't move some toes at all and what he mainly feels is a buzz — the electric scream of nerves no longer there.

The bad little bug that did this is a microscopic comma-shaped bacteria that thrives in warm salt water. It is called *vibrio vulnificus*. He got it, like most victims, doing something he loved: eating raw oysters plucked from the tranquil shallows of the Gulf of Mexico.

And Claude Boynton is lucky. He is still alive.

Most Dangerous Beast In The Sea

On June 24, nearly four years after Claude Boynton survived his oyster attack, Florida health authorities, spooked by a record nine deaths last year, ordered restaurants that sell them raw to immediately post this warning:

"Consumer information: There is risk associated with consuming raw oysters or any raw animal protein. If you have chronic illness of the liver, stomach or blood disorders or have immune disorders, you are at greater risk of serious illness from raw oysters and you should eat oysters fully cooked. If unsure of your risk, consult a physician."

The "risk" that sign warns you about is *vibrio vulnificus*. You can't smell it or taste it. You can't see it with the naked eye. Short of a lab test, you can't detect it in a raw oyster.

But it's as lethal as food-borne bacteria get. *Vulnificus* kills at an astoundingly high rate — 46 to 60 percent of the people



WARNING: One of the great pleasures of Florida cuisine may be hazardous to your health.

SHELL

it infects through raw oysters die. Few food-borne bacteria approach that efficiency and most only sporadically kill. *Salmonella*, which causes the most illnesses, kills perhaps two of every 1,000 people who get it.

Vibrio kills with stunning speed. The first symptoms can hit in 18 hours and death can occur within a day—even with swift, accurate diagnosis and proper medical treatment.

Vibrio kills ugly. Victims often suffer what amounts to a wet gangrene—the rapid swelling and creeping flesh loss Boynton experienced.

"This particular organism," says Morris Potter, assistant director for food-borne disease for the federal Centers for Disease Control in Atlanta, "has a predilection for killing."

"There are other food-borne illnesses like botulism that can be pretty deadly," says Gary Hlad, deputy state epidemiologist. "In Florida, this has definitely been the deadliest."

It is supposed there, a reasonable person would conclude the only sane thing to do with a raw oyster is drop it in a pot and boil the bejesus out of it.

But scientists, doctors and, most passionately, people whose livelihood depends on the oyster's raw appeal are quick to point out that, with rare exception, a healthy person can gobble *vibrio* up and never blink. Hlad recently paid the odds of a healthy raw oyster eater contracting a *vibrio* infection in Florida at less than one in a million, and the chance of death nearly five times more remote.

Clearly, *vibrio* is not black plague. Despite its potent potential, there have been few infections and fewer deaths.

Since 1981, when health authorities first started tracking it, 71 *vibrio* cases have been linked to raw oyster in Florida, an average of six a year. Thirty-seven died, an average of three a year. Another 36 got the bacteria when cuts or sores were exposed to sea water. Fourteen got it from an unknown source. Overall, *vibrio* has infected 126 people in the past 12 years—54 percent from eating raw oysters—and killed 45. This year's first illness and death, an 89-year-old man from Marion County, was recorded July 2.

As the state health warning emphasizes, most of the victims had medical problems that gave *vibrio* an edge. Many, like Boynton, suffered liver disorders that put them at the highest risk of all. They are 80 times more likely to get sick and more than 200 times more likely to die.

Other health problems may also make you more susceptible: iron imbalances, diabetes, blood disorders,



Photograph by MIRE STOCKER / Miami Her

weakened immune systems from AIDS or AIDS-related illnesses, chronic diseases like cancer, intestinal problems, low stomach acid levels, steroid dependency and alcoholism.

Hlad cautions the elderly should probably be added and the most cautious experts even speculate something like taking too many Tylenols or having a drink—does anyone have raw oysters without beer?—could increase a healthy person's risk: 5 to 10 percent of victims don't appear to have had any underlying illness. In a seafood-conscious state with 13 million people, oysters may pose potential problems for as much as a quarter of the population.

Still, with an estimated three million Floridians eating them—including what the state Department of Health and Rehabilitative Services figures is at least 71,000 with liver disorders—it's clear thousands of people at even the most severe risk are ingesting *vibrio* without even a sour belch. Throw in tourists and millions of people are eating tens of millions of oysters annually. Contrast that against just 43 deaths—37 from *vibrio* and 6 from other related *vibrio* strains—in a dozen years.

Power tools have killed more people. "There's no reason for an oyster panic," says Jerry Sassoon, executive director of the Organized Fishermen of Florida, a statewide trade group. "There's no reason for most people not to eat raw oysters."

Some experts say the bivalve has been branded undeservingly dangerous.

"I don't mean to make this disease sound like it's not a really horrible disease," says Louise McFarland, Louisiana's state epidemiologist. "It's just that I hate to scare everyone that loves raw oysters. Any bacteria can cause death."

But a number of critics—from victims and their families to national food safety advocacy groups to other public health officials—point to a litany of half-shell hazards and question whether anyone, healthy or otherwise, should be eating an oyster raw.

There are numerous other nasties besides *vibrio* as you can acquire from oysters: things that can confine you to the bathroom for two days of retching and runs or erase parts of your memory or paralyze you, or lay you out on an autopsy table.

One new federal study suggests a half dozen other *vibrio* bugs that show up most often in oysters may be nearly as troublesome as *vibrio*. Add in infections from these other strains and the number of illnesses caused in Florida since 1981 nearly quadruples: from 73 for *vibrio* to 289 total.

And *vibrio* are just part of the problem. Oysters can give you Hepatitis A and Norwalk virus and more rarely pass on toxins associated with "red tide" algae blooms. Not even counting *vibrio*, oysters outnumber all other seafoods combined, 226 to 225, in HRS records of food



Photograph courtesy of family

Eric Rosanwald ordered an oyster appetizer one Friday evening. When his daughter called Monday morning he said, "Darling, I can't get out of bed." Fourteen hours later, he was dead.



Vicki Peal sits beside her father's favorite rocker in the Wilton. Manners home they shared. Now the chair is a shrine, her father is gone, and Peal wants to get the word out: Oysters can be dangerous.

"Raw oysters may be the most dangerous food there is," says a UF professor of food science. Even so, more people are killed by power tools.

by MIKE STOCKER / Miami Herald Staff

related illnesses since 1981.

A joint report issued by the U.S. Food and Drug Administration and the CDC in 1991 stated that of every 1,000 people who eat raw or undercooked molluscan shellfish — oysters, clams or mussels — one may become ill. The same report put the risk of illness from chicken at one in 35,000.

When you total all the problems, says Gary Rodnick, a University of Florida professor of seafood technology who is helping direct research on *vulnificus*: "Raw shellfish may be the most dangerous food there is."

Recipe For Disaster

There is one simple step to ensure any oyster you're eating doesn't contain *vulnificus*. Don't eat it raw. *Vulnificus*, and most other bad things oysters can take in, will perish if the oyster is steamed, baked, fried, broiled or boiled — as long as the meat reaches 145 degrees for six to eight minutes.

That's fine for Rockefeller, stews, stuffings and other recipes but it will break the hearts of oyster lovers. Raw oysters are consumed with a degree of passion reserved for few delicacies. In her slim 1941 classic, *Consider the Oyster*, famed food writer M.F.K. Fisher captured the flavor of both the flesh and mist.

"It should," she writes, "be opened at street temperature in a cool moon, nevericed, and plucked from its

rough irregular shell at once, so that its black gills still vibrate and emerge with the shock of the air upon them. It should be swallowed not too fast, and then its fine salt juices, more like the smell of rock pools at low tide than any other food in the world, should be drunk at one gulp from the shell."

Walk into any raw bar and you will see similar displays of obsessive ceremony and gluttony. Purists who shudder at the application of even a fork, slurp them unadorned from shells. Some swear by a squeeze of lime, others must have lemon, or a dip in cocktail sauces.

There is another thing that sets oyster and oyster connoisseurs apart. Unlike other cooked flesh dishes — sushi and steak tartar, being the most popular — oysters are eaten not just raw, but alive.

Properly chilled and handled, an oyster stays dormant but healthy in its sealed shell for 10 days or so. It goes into shock once its shell is opened. But consumed quickly, it's still living. Lacking eyes and ears and possessing only a rudimentary sensing system, the oyster, biologists will assure you, doesn't feel a thing.

But you might. Any raw animal product — milk, eggs, meat, poultry, fish — carries exponentially more risk than the same product cooked. Most food illnesses have been tied to bacteria left alive in uncooked or undercooked foods.

Steven Orwell, a professor of food technology at the University of Florida, assesses the danger this way: "It's not the oysters, it's the recipe."

Some Like It Cold

The oyster is essentially a tiny pump. It feeds and breathes by pumping water, about four quarts an hour, through feathery gills that fringe its plump oval body. This capability gives oysters their distinctive regional flavors, varying mineral levels alter taste.

It's also how oysters absorb *vulnificus*.

Like any other pump, oysters suck in whatever happens to be in the water: bacteria, viruses, chemicals. Normally, biologists say, the oyster goes right on oyster-ing away. This pump does not choke on impurities.

Shellfish of all varieties — clams, mussels and others as well as crabs — can store *vulnificus* and have been known to pass it along to humans at the dinner table, but the oyster is particularly equipped for that nasty chore. It tends to concentrate things in its guts longer and in higher volumes than other shellfish.

Vulnificus has nothing to do with the pollution that taints the coastal shallows or estuaries where oysters

grow. It's supposed to be there, a naturally occurring free-swimming bacteria.

The first modern infection was reported in 1970. Two days after clamming off Rhode Island, a man developed diarrhea, vomiting and a leg rash. Scientists didn't know it was *vulnificus* until the strain was isolated several years later. It was not even named until 1979. Clinicians drew on the Latin word for wounding, befitting its propensity to destroy human tissue.

How *vulnificus* eluded detection for so long and why just in the last decade it seems to have surfaced, no one can explain. It has likely been around for hundreds — maybe thousands — of years. Researchers have traced what may be the first case cited in medical literature to Cronin, a fisherman from a small island in the Aegean Sea called Thasos. Treated by no less a physician than Hippocrates himself, Cronin, unfortunately, still died.

Today, *vulnificus* is found worldwide but has caused the most trouble in the shallows fringing Florida's Panhandle and bending west around the Gulf Coast to Texas — the most productive oyster grounds in the United States.

Scientists believe the Gulf's warm temperatures and moderate to low salinity fuel *vulnificus* growth. During the winter and in the cooler North, says UF's Rodnick, the bacteria seems to disappear or lapse into dormancy. But as spring comes and the sun and Gulf currents warm the water, watch out.

In summer, it amounts to a coin flip — 50-50 — that a raw Gulf oyster contains *vulnificus*. The bacteria is that common. Illnesses and deaths tend to follow the same sort of seasonal pattern. More than 95 percent of cases occur between April and the end of October.

It doesn't spin: follow the old "R" rule about oysters' only eat them in months with that letter. But it's close. Clearly, the colder it is, the safer raw oysters are.

The Appetizer Was A Killer

Eric Rosenwald — "Papa" to his daughter and grandchildren — usually didn't go out for dinner. But he loved fresh seafood.

It was a Friday evening last September — 10 months before Florida would require restaurants to post raw oyster warnings. Rosenwald's daughter, Vicki Peal, remembers it well — a lovely day. Peal, her husband Steven kids Ashley and Christopher, and 80-year-old Rosenwald drove to a restaurant in Wilton Manors, one of Rosenwald's favorites. He ordered broiled dolphin, same as Steven Peal. He also decided on an appetizer, raw oysters. Nobody recalls him eating them before.

Monday morning, Peal called from the school in Fort Lauderdale where she teaches physically impaired children. Just to check in.

Rosenwald was outside, taking bids from a man there to replace a fence Hurricane Andrew had uprooted. He told his daughter he felt a little ill but promised to call back. He did, this time saying he was going to take a nap. That startled Peal. Rosenwald was small but sturdy. He'd had only a few minor medical problems and he never took naps.

Around noon, she called again. "Darling," he answered. "I can't get out of bed."

She rushed home. At first, it didn't seem too bad. "He said, 'My hands are shaking. I couldn't eat my muffin.' I felt him. He didn't feel warm. He said, 'I think I have the flu.'"

The family doctor, reached by phone, agreed. Rosenwald took a few pain pills and tried some soup. But he just got worse. At 4 p.m., he complained of pain everywhere. His voice



Photograph by MIKE STOCKER / Miami Herald Staff

Claude Boyton and wife Kathleen have battled back from Claude's encounter with vibrio *vulnificus*, a vicious little bacterium that takes to hang out in raw oysters. The couple documented the ordeal in photographs too horrible to print here.

Heart disease isn't just for old folks. It occurs in almost one in a hundred children and, years ago, it was almost always fatal. But not anymore. At the "LabDub Club"

get-togethers than the doctors, nurses and researchers who staff the various Pediatric Cardiology programs at the University of Miami/Jackson Memorial Medical Center.

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We fix broken hearts.



picnic, we happily play host to children, our former patients, who have recovered from cardiac surgery. Some have even had a heart transplant. It's a joyous occasion, their appreciation of life is truly heartfelt. Of course, no one has a better time at these annual

At the "LabDub Club" picnic, we play host to children who have had cardiac surgery.

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SHELL

slurred. When Steven Peal tried to help him to the car for a trip to the emergency room, he screamed at the touch. They called 911.

At Holy Cross Hospital, the doctors first thought he had a bad flu. By 8:30 p.m., as his condition deteriorated, they told Vicki Peal they suspected poisoning. They started tests. Each hour, something else seemed to go wrong. Peal tried to comfort him but her father, a man who could speak six languages, could not manage a word in any of them. A lung collapsed. His blood pressure dropped. Then his heart stopped. They tried electric shock and heart massages.

"I stood outside that room. I remember hugging the wall. 'My God, what is happening?'" At 1:54 a.m. Tuesday, he was dead.

Dangerous Liaisons

Boynton and Rosenwald suffered the severest and most common *vulnificus* infection, a systemic breakdown called primary septicemia. Basically, it's toxic overload — the bloodstream flows with poison.

Toxins produced by the bacteria can rapidly destroy tissues, muscles and nerves, and reduce blood pressure to lethal levels. Organs can fail. The victim goes into septic shock and often dies. In Florida cases, according to the CDC, victims with liver disease died in two-thirds of the cases, 30 out of 45. Scientists believe this happens because *vulnificus* thrives on iron. Liver disorders raise iron levels, essentially planting *vulnificus* in more fertile ground than healthy people provide it.

People without liver problems died in 38 percent, five of 13, cases. These victims may have been susceptible because their natural defenses against bacteria — immune systems or stomach acids, for instance — were too weak to fight off the extremely aggressive bacteria.

While oysters account for 58 percent of infections and 88 percent of the deaths in Florida, you can get *vulnificus* in a number of other ways, including accidentally swallowing sea water. Or — in at least one documented case — having sex in the ocean.

Initially, *vulnificus* infections resemble the flu and can easily fool doctors. Even short delays in treatment — antibiotics, most successfully, tetracycline — can be critical. Once shock sets in and blood pressure dips, the death rate approaches 100 percent.

Unless a doctor suspects *vulnificus* or someone mentions "oysters," it can be hard to

detect. In Rosenwald's case, doctors didn't know what they were dealing with until test results came back the next day. By then, it was too late.

FLA Law

For 22 years, Mike Davis has run Cedar Key Fish and Oyster. The last few years have been tough. Sales dropped 25 percent after last year's nine deaths and attendant publicity. The new warnings aren't likely to help. After Louisiana posted warnings in 1990, sales declined 20 to 50 percent.

In July 1991, the industry was rocked when a cholera strain ravaging South America showed up in Alabama's Mobile Bay. Four shellfish beds were closed. Off Florida, beds are closed periodically when sewage, pollution or fresh water contaminates beds. And now, this *vulnificus* thing.

Oyster sales have declined steadily to half what they were in 1975. In the last two years, alone, says Mark Collins, environmental administrator for the state's bureau of marine resources, the wholesale price of Apalachicola oysters has dropped by half — from \$25 for a 100-pound bag to about \$12.

Davis, echoing many in the industry, calls the new warnings "scare tactics" sure to make bad things worse. He sees it like this: A lot of people who can eat raw oysters safely won't want to anymore. And some of the few people who should not eat them, will anyway.

"Look," says Davis, "I understand if somebody died from eating oysters in your family, you'd want action and you'd want action taken quick. I don't want to come off sounding cold hearted. I feel really sorry for them. But you, me and the whole federal government can't protect us from ourselves. If somebody wants to eat an oyster buddy, you can't stop them from eating an oyster."

Still, with the number of documented deaths climbing and health officials becoming more alarmed, the industry has begun to agree to "consumer messages."

"It's a tragedy when anybody dies, certainly in an unforeseen circumstance," says Robert Nelson, a spokesman for the 5,000-member Florida Restaurant Association, "but I still go back to the fact that the potential of the population to die is extremely low. I think it's very important that the situation is not sensationalized and that we keep things in perspective. One must weigh the economics."

And the economics weigh heavily. Red Lobster restaurants dropped raw oysters from the menu a few years ago for fear it

lawsuits. Disney-owned restaurants around the Orlando tourist attraction removed them from the menu a few months ago, Nelson says.

It's becoming increasingly obvious that oysters pose tremendous legal problems for everyone who handles them from boat to raw bar.

In April, a Northern California man, William Kilpatrick received a \$1 million settlement from five companies involved in the transport and sale of Louisiana oysters.

Kilpatrick ordered raw oysters from room service at a Holiday Inn in San Francisco. Within 48 hours, Kilpatrick, an admitted alcoholic, got ill. The infection — not *vulnificus* but another related vibrio — soon spread, destroying skin, muscle and tendon. During a 60-day hospitalization, Kilpatrick developed a bone marrow infection and suffered numerous fractures. Today, he walks with the aid of a cane.

In Florida, Michael Widoff, the Boynton's Fort Lauderdale attorney, is suing the Cocoa Beach restaurant where Boynton ate the oysters and three companies that handled the oysters between harvest in Louisiana and the restaurant.

Jerry Jeffrey, a Matiland attorney representing the restaurant, says it's impossible for the owner to have issued a warning about a bacteria he didn't know existed. Boynton was infected four years ago, before much mainstream attention was focused on *vulnificus*.

"To ask a restaurant to warn everybody about every thing every person is allergic or susceptible to, that's preposterous," Jeffrey says. "It's beyond laughing."

Jeffrey argues that Boynton's doctors should have warned him. If not, he says, then blame lies with the agencies charged with ensuring that shellfish are safe to eat. He has already filed a motion that would add the state as a defendant should Boynton win. It's not like a case of botulism, he says, where food has been handled improperly. His client sim-

ply served fresh raw oysters. Widoff argues that "oysters are, in effect, defective" and Boynton should have been warned about the potential perils.

"The industry knew they had a problem. They say, 'Well, it was only a few people.' How many deaths is too few? The industry is blaming the medical profession? Well, the doctors don't sell the oysters."

Slow To Act?

How do you protect the public without killing an industry? So far, the answer has been the warning label.

In 1990, Louisiana — which has recorded 16 *vulnificus* deaths in 15 years — required health advisories on raw oysters posted at restaurant tableside.

In 1991, a handful of deaths, California ordered warnings wherever Gulf raw oysters are sold, the first linked to a specific food state history.

Florida, with the overwhelming majority of deaths and infections, decided to do the same only this time. Eleven people died in the two years between the time California posted warnings and Florida required its own — including Vicki Peal's father.

Peal believes persistent problems were ignored.

"I'm not saying to shut the industry down. I'm just saying I wish I could have been an educated raw oyster consumer. Somebody has to do a better job."

Her concerns are echoed by consumer groups complaining that regulators haven't done enough to protect people and warnings haven't come fast enough or gone far enough.

"The industry doesn't want a warning label but they haven't come up with a method to address the problems. Instead, they keep claiming their oysters don't make people sick. That's wrong," says Caroline Smith DeWaal, staff attorney for Washington-based Public Voice for Food & Health Policy, a public health advocacy group calling for stricter federal standards

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SHELL

and mandatory inspections of seafood. Most actual regulation, inspections and decisions now pretty much fall to state agencies.

Douglas Smith, who acted the California case for \$1 million, says the threat of *vulnificus* and other *vibrio* was acknowledged in a 1986 federal shellfish regulations manual, but nothing about handling oysters or informing the public changed for years.

"I just think it's impossible to comprehend. My argument was it was tantamount to playing Russian roulette with people's lives."

David Heil, chief of the DNR's bureau of marine resource regulation and development and the man who oversees the shellfishing industry, says Florida did as much as the risk to the public warranted. He says the state didn't delay mandatory warnings.

"They're ahead of us in the sense of putting the labels on, yes, but we've done other things," Heil says. Since 1985, he says, Florida has issued yearly warnings to physicians and the media and provided consumer information pamphlets. The U.S. Food and Drug Administration, responsible for regulating the seafood industry at the federal level, also published articles in medical journals and officials' bulletins, as did the CDC.

How well the publicity blitz filtered down is questionable. In a survey of at-risk patients in seven clinics across Florida two years ago, University of Florida researchers found only 42 of 164 (26 percent) knew they were supposed to avoid raw oysters. It was a limited survey, but coupled with the nine deaths last year, it was enough for Florida health authorities to require state warnings. Now, "letters sold by processors and wholesalers must carry a state warning on a similar requirement for markets and seafood markets. Restaurants, under an emergency order (HRS) hopes to make permanent over the state's objections, must post a warning visible to patrons. Restaurant operators think that's illogical. Where will

the signs stop? Do you want people about potential hazards of the raw eggs in Caesar salad dressing or the beef in every hamburger?"

Tom Bilty, head of the FDA's Office of Seafood, says that the agency has proposed a new system for monitoring seafood safety. With *vulnificus*, he says, one possibility is inserting oyster warnings with Social Security checks or mail warnings to specific risk groups. The agency is also considering federal warning labels, but there are too many questions to set rapidly, he says.

"In terms of relative risk, raw molluscan shellfish is riskier than all other seafood. In terms of a national risk relative to . . . other public health concerns, starting perhaps with AIDS, we've got to keep this in perspective."

In the meantime, University of Florida researchers are experimenting with treatments that someday may produce safer oysters—everything from flooding oysters with radiation to immersing them in tanks of sea water treated with ultraviolet light or ozone. The idea is to kill the bacteria without harming the oyster.

Before that happens, the state may take more severe steps.

One possibility is a flat-out ban on harvesting oysters during warm months when *vibrio* counts are high. It's a notion that is gaining attention from regulators, health experts and the industry alike. Epidemiologist Hladay supports the idea. Heil of the DNR called it "perhaps the next possible control," but says there are problems.

In one study of Florida victims, researchers could find no link between the number of oysters eaten and the severity or swiftness of the infection. Some people got ill on three. Others ate four dozen. No one can even say how many "bugs" it takes to make someone sick. How, he asks, would you set a standard?

But even Lee Wedding, executive vice president of the National Fisheries Institute, the industry's largest trade and lobby group, views it as an option if Gulf oysters continue to taint the reputation of seafood. It might not require a complete ban, he says, just on selling them raw. That, Mike Davis of Cedar Key and others in the

industry argue, would be yet another blow to an already reeling industry and would penalize the vast majority of healthy oyster eaters at the expense of a smaller risk group.

A Warning

Stomach-turning pictures—snapshots of gaping wounds—document the repair-in-progress. Now, Claude Boynton is taking off his shoes and socks to display the completed job.

Bones and tendons stand out in mutilated relief under paper skin atop his right foot. His left ankle is big as a grapefruit. Deep scars mark both calves. The skin is mutilated red, like it has been boiled. He speaks in a calm voice with the soft drawl of his native Georgia.

"All my life I'd been such a big, strong person. You get humbled. Walking up a flight of stairs is an adventure now. You ask me how it's affected me. To sit up at the counter and put my foot on one of the rungs of the bar stool is a painful experience. Just to walk through a shopping center is an achievement. My eldest boy, he's 15 years old. He's a baseball player. There are things I can't do with him anymore."

Boynton stops. He stares down at his feet, perplexed. The thought comes through clear on his face: These *just* must belong to someone else. He tries not to, but he weeps for a moment.

Claude Boynton reads the warning message the state has ordered posted. He shakes his head: not strong enough.

"Serious illness." What do they mean by "serious illness?" Out of work a couple of days? Serious illness means you die and you die quickly. Serious illness means you might have major surgery. Serious illness means you look like this." He gestures at his feet.

"People need to know that."

CURTIS MORGAN is a Herald staff writer.

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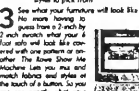
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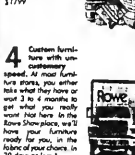
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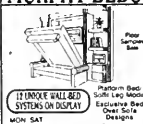
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TESTIMONY OF NANCY LONGO
CHEF/OWNER OF PIERPOINT RESTAURANT IN BALTIMORE, MD
AND MEMBER OF
CHEFS HELPING TO ENHANCE FOOD SAFETY



Brooklyn, NY
September 10, 1993



Good morning, Chairman Manton and members of the Merchant Marine and Fisheries Committee. My name is Nancy Longo and I am the chef/owner of Pierpoint Restaurant in Baltimore, MD. I have been a chef for over nine years. At Pierpoint, which has been open since 1989, we specialize in seafood. Prior to opening Pierpoint, I worked at another Baltimore restaurant called Something Fishy.

I am also a member of the Chefs Helping to Enhance Food Safety Coalition, a group of over 600 chefs and other food professionals from 40 states who are working to improve the safety of our nation's food supply. I am a member of the Advisory Committee for CHEFS. Launched in 1991 at a press conference with Julia Child, CHEFS has supported Congressional efforts to enact legislation to protect consumers from contaminated, uninspected seafood.

Thank you for inviting me to testify today at this oversight hearing on seafood safety. I hope to tell you how the lack of adequate protection for the seafood supply has affected me both personally and professionally.

In late 1990, I developed lesions on my hands and arms. I was sick for three months and only recovered following surgery in January of 1991 to remove the lymph nodes in my elbows. My doctors told me that bacteria from the fish I regularly handled had lodged

in the lymph nodes. Although I was treated with antibiotics and anti-inflammatory drugs for weeks, the lumps that had formed in my lymph nodes failed to go away until treated surgically.

During the three months I was ill, I couldn't use the affected hand and arm, which dramatically limited my ability to work. Following the surgery, I couldn't work at all for three to four weeks. Even once I was back at work, full recovery took many months.

This illness has left me with many long term effects. I have irreversible nerve damage in my arm that causes recurrent pain. And despite the fact that seafood is featured in my restaurant, I cannot eat it and I don't even touch it unless I am wearing rubber gloves.

On a professional level, this experience highlighted for me the care I must take in serving seafood to my customers. I am especially cautious about choosing fish that appears fresh and wholesome and cooking it thoroughly. Even with these cautions, however, I cannot detect all the potential hazards that are present. Fish that looks and smells perfect can still contain natural toxins, like scombroid poisoning or ciguatera, and chemical contaminants, like mercury and pesticides.

Let me give you an example. Two years ago, I occasionally served a fish called escolar in my restaurant. I had no knowledge of any natural toxins or side effects from the fish. A customer brought to my attention that the fish caused diarrhea. I did further research that confirmed that this was a common side effect from this particular variety of fish.

Needless to say, I stopped serving escolar. However, I was never officially contacted by the FDA, the local health department or even the restaurant association to warn me about escolar's affects. This experience makes me concerned, that despite my best efforts and care, there may be many other substances in fish products that I don't know about and I'm not being warned about.

As a chef and restaurant owner, I am accountable to my customers, who are also becoming more concerned about the safety of the fish they eat. When a customer becomes ill following a meal, fish is frequently suspected. The absence of a mandatory federal inspection program for seafood heightens my concerns about the product.

Seafood safety legislation that provides a targeted approach to the potential safety problems would, I believe, provide a safer, cleaner product. It would help give me and my customers greater confidence in the product and could ultimately protect me from liability concerns that I have. This change would ultimately help

the seafood industry as well. Once people have greater assurance in the safety of the product, demand will surely increase.

The Chefs Helping to Enhance Food Safety coalition was formed to give professionals like myself a voice in the policy debate on seafood safety. As chefs and restaurant owners, our livelihood and reputations are at stake every time we prepare a meal. Thank you for inviting me to testify today on this important public health issue.

Chairman, Congressman Manton, members of the
Subcommittee on Fisheries Management:

Topic: Reauthorization of the Magnuson Fishery Conservation
and Management Act and Seafood Safety.

II Hearing on "Seafood Safety", September 10, 1993,
Kingsborough Community College (KCC) of the City University of
New York.

I am Prof. Laxman Kanduri, coordinator of the Seafood Business Management Program (SBM) at KCC and my expertise is in the field of Seafood Science and Technology and Safety. On behalf of President Goldstein, Dean Drucker, faculty and staff of the Marine Technology Program, I welcome you to Kingsborough Community College.

In the recent past, the regulatory agencies such as the United States Food and Drug Administration (USFDA), the National Marine Fisheries Service (NMFS) of the United States Department of Commerce (USDC) and the industry have been trying to address the consumer concerns regarding the necessity to insure the safety of seafoods. Ideally speaking, to ensure hundred percent safety, the entire seafood supply amounting to billions of pounds of domestic and imported seafood intended for consumption, somehow should be inspected and verified for safe consumption. However, to achieve such a mammoth goal would involve a colossal manpower need (Federal, State and local regulatory agencies) and financial resources which makes it virtually impractical to achieve.

An alternative solution to effectively inspect seafood products and to ensure seafood safety is to apply the principles of Hazard Analysis and Critical Control Points (HACCP) based system to the seafood industry, wherein the industry is made responsible to formulate an inspection plan and monitor their own inspection plan, along with maintaining precise records of plant activities. The food inspectors of the state and/or federal regulatory

agencies will then verify the inspection plan and records; confirming that a good safety program is in place in each facility. Such a systematic approach will help ensure a more safe product through a more effective inspection system. In other words, the HACCP based system would provide a direction to the inspecting personnel, so that they can focus their efforts at critical areas. Such a system will result in increased productivity and will allow for a better utilization of already shrinking government budget and manpower resources. However the successful implementation of HACCP program would require trained personnel.

Seafood Business Management (SBM) Program of KCC happens to be the only of its kind in the country offering a 2 year college degree. President Leon Goldstein of the Kingsborough Community College (KCC) of the City University of New York (CUNY) is well known for his far sightedness in recognizing the need of special educational needs of the industry. President Goldstein encouraged and supported for the development of a HACCP-based curriculum for the college's SBM. While recognizing the college's excellence and uniqueness of the program, NMFS of the USDC, provided a grant of \$93,000 to KCC for developing and providing training in the techniques of HACCP-based Quality Control programs in the September of 1992 and is now completed. At the conclusion of the pilot HACCP program, our students took and passed the NMFS certification examination.

As you are probably aware , The Office of Seafood of the USFDA is currently in the process of submitting its newest proposal for government regulations (HACCP-based) concerning seafood inspection within the next 30-60 days. The new regulations will be based on HACCP based system, and therefore the current workforce of the FDA and the new employees in the profession need

to be retrained in HACCP-based approach to food inspection.

In this respect, our college is uniquely situated in NYC, with the highest per capita seafood consumption in the country. Secondly, KCC is serving the function of providing workforce that is professionally trained in the latest skills. KCC is educating and training the inner city youth in skills with a potential of lifetime gainful employment.

The college not only trains current FDA employees (food inspectors) who are enrolled part-time in the college's SBM program, but also has an internship program with the Regional FDA office to employ full-time students from the program.

The KCC would like the Committee to recognize and recommend the federal regulatory agencies such as USFDA to make use of the great facilities and the program at KCC to train their inspectors in HACCP-based approach to seafood inspection. Secondly, to recommend KCC as a N.E. Regional Training Center for all the regulatory agencies dealing with training in HACCP-based systems. Thank you for giving me this opportunity to share these thoughts with you.

103D CONGRESS
1ST SESSION

H. R. 780

To reauthorize the Magnuson Fishery Conservation and Management Act.

IN THE HOUSE OF REPRESENTATIVES

FEBRUARY 3, 1993

Mr. MANTON (for himself, Mr. STUDDS, and Mr. YOUNG of Alaska) introduced the following bill; which was referred to the Committee on Merchant Marine and Fisheries

A BILL

To reauthorize the Magnuson Fishery Conservation and Management Act.

1 *Be it enacted by the Senate and House of Representa-*
2 *tives of the United States of America in Congress assembled,*

3 **SECTION 1. REAUTHORIZATION OF MAGNUSON FISHERIES**

4 **CONSERVATION AND MANAGEMENT ACT.**

5 (a) IN GENERAL.—Title IV of the Magnuson Fishery
6 Conservation and Management Act (90 Stat. 359–361) is
7 amended to read as follows:

**“TITLE IV. MISCELLANEOUS
PROVISIONS**

“SEC. 401. AUTHORIZATION OF APPROPRIATIONS.

“There are authorized to be appropriated to the Secretary, for purposes of carrying out the provisions of this Act, not to exceed the following sums:

“(1) \$102,000,000 for fiscal year 1993.

“(2) \$106,000,000 for fiscal year 1994.

“(3) \$110,000,000 for fiscal year 1995.

“(4) \$114,000,000 for fiscal year 1996.

“(5) \$118,000,000 for fiscal year 1997.”.

(b) CLERICAL AMENDMENT.—The table of contents in the first section of the Magnuson Fishery Conservation and Management Act (16 U.S.C. 1801 note) is amended by striking the items relating to each of sections 402, 403, 404, 405, and 406 and inserting the following:

“Sec. 401. Authorization of appropriations.”.

ONE HUNDRED THIRD CONGRESS

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U.S. House of Representatives Committee on

Merchant Marine and Fisheries

Room 1334, Longworth House Office Building
 Washington, DC 20515-6230

September 7, 1993

MEMORANDUM

TO: Members, Subcommittee on Fisheries Management

FROM: Subcommittee Staff

SUBJECT: New York City Field Hearing on seafood safety and H.R. 780, legislation to authorize the appropriation of funds for implementation of the Magnuson Fishery Conservation and Management Act

INTRODUCTION

At 9:30 A.M. on Friday, September 10, 1993, the Subcommittee on Fisheries Management will hold a hearing at the Marine and Academic Center, Kingsborough Community College, 2001 Oriental Blvd., Brooklyn, N.Y. The hearing will be on seafood safety (including H.R. 1412, the National Shellfish Safety Act of 1992) and H.R. 780, legislation to authorize the appropriation of funds for the Magnuson Fishery Conservation and Management Act (popularly known as the Magnuson Act). This hearing is the second Subcommittee hearing on seafood safety and the fourth Subcommittee hearing on the reauthorization of the Magnuson Act.

The hearing will include the following witnesses on reauthorization of the Magnuson Fishery Conservation and Management Act: Dr. Vaughn Anthony, National Marine Fisheries Service; Prof. Anthony DiLernia, Mid-Atlantic Regional Fishery Management Council; Mr. Gordon Colvin, New York State Department of Environmental Conservation; Mr. James O'Malley, East Coast Fisheries Foundation; Mr. Nick Castoro, New York Sportfishing Federation; Mr. Nils Stolpe, New Jersey Commercial Fisheries Association; and Mr. Thomas Fote, Jersey Coast Angler's Association.

Witnesses on seafood safety will include Mr. Gordon Colvin, New York State Department of Environmental Conservation; Mr. Ken Gall, New York Sea Grant; Mr. Roger Tollefsen, New York's Seafood Council; Ms. Caroline Smith DeWaal, Public Voice; Ms. Nancy Longo, Chefs Helping to Enhance Food Safety; and Prof. Laxman Kanduri, Kingsborough Community College.

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BACKGROUND ON MAGNUSON FISHERY CONSERVATION AND MANAGEMENT ACT

The Magnuson Act was last authorized and extensively amended in 1990 (P.L. 101-627). The current authorization expires on September 30, 1993.

H.R. 780, as introduced, is a simple reauthorization of funds for implementation of the Magnuson Act. The purpose of this series of oversight hearings is to examine proposed changes to current law.

The primary goals of the Magnuson Act, passed in 1976, were the conservation and management of the U.S. fisheries resources, the development of the U.S. domestic fisheries, and the phase-out of foreign fishing activities within the 200-mile fisheries conservation zone adjacent to the U.S. coastline. This area became known as the Exclusive Economic Zone (EEZ) following a 1983 proclamation by President Reagan.

The Magnuson Act has achieved the goals of restricting foreign fishing vessels in the EEZ and developing domestic fisheries. The percentage of fish harvested by foreign nations has declined from 71 percent of the total catch in 1977 to about 0.2 percent in 1991. However, some critics contend that the law has been less successful in conserving fishery resources.

The Magnuson Act created eight Regional Fishery Management Councils (Councils) charged with implementing these goals through the promulgation of fishery management plans in coordination with the National Marine Fisheries Service (NMFS). A list of the states represented on each Council can be found at the end of this memorandum.

The National Fish and Wildlife Foundation reports that 33 percent of fish stocks under Council management are currently less abundant than before the Magnuson Act was passed in 1976, and the National Marine Fisheries Service (NMFS) estimates that 28 percent of U.S. fish and shellfish stocks are currently overutilized.

In addition to managing fisheries resources for conservation purposes, Councils are responsible for allocating resources among various and often competing users. The process of managing fisheries is accomplished through preparation of fishery management plans (FMP's) by the Councils and, in some cases, by the Secretary of Commerce. To date, the Councils have prepared and implemented over 30 FMP's, some with numerous amendments. A list of approved FMP's is included with this memorandum.

Following the development of an FMP, a Council forwards the plan and proposed regulations to the Department of Commerce. The Department must approve the plan or return it to the Council for further consideration or revision. If the plan is approved, NMFS must then issue regulations to implement the plan. Many find this process lengthy and inefficient since the Department does not begin to review an FMP until the plan has been submitted by a Council, often fails to meet statutorily mandated deadlines, and is prohibited by statute from making revisions to the plan even in the face of changed circumstances.

The national standards for fishery conservation and management that guide the Councils' work (contained in Section 301(a) of the Magnuson Act), and the key principle of optimum yield (which includes ecological, social, and economic factors) require the Councils to achieve a balance among users and between science and socioeconomic factors. In attempting to achieve this balance, the Councils are often criticized by those who believe that particular standards or factors are not properly addressed or given adequate weight.

FUNDING

H.R. 780 authorizes the appropriation of funds for implementing of the Magnuson Act in the following amounts:

\$ 102 million for Fiscal Year 1993
 \$ 106 million for Fiscal Year 1994
 \$ 110 million for Fiscal Year 1995
 \$ 114 million for Fiscal Year 1996
 \$ 118 million for Fiscal Year 1997.

Committee Members must determine if these funding levels are appropriate.

ISSUES

Numerous issues relating to the Magnuson Act and its implementation have been raised by the fishing industry, conservation groups, scientists, the Regional Councils, recreational fishermen, and federal officials. It is expected that these same concerns will be raised by witnesses at this hearing. The following list highlights considerations that have received significant attention, but it is by no means exhaustive.

CONSERVATION

- * Does the domination of Councils by commercial and recreational fishing interests that may be guided by short-term economic goals undermine the goal of long-term conservation of fisheries resources?

- * Are Councils acting responsibly to prevent overfishing? Should more strict standards to eliminate overfishing be adopted in FMP's?

- * Should Councils be required to take the least environmentally risky approach to fisheries management?

- * Do Councils give sufficient attention to fisheries that are not currently at risk but might become so? If not, is this due to a lack of resources available to the Councils?

- * Should Councils have veto power over non-fishing activities that affect fisheries habitat?

- * Should statutory prohibitions on harvest and retention of bycatch (i.e., undersized fish, non-target species) be enacted?

- * Some industry observers believe that in managing resources, Councils often select an option that is overly disruptive of the industry while not justifiable from a conservation viewpoint. Should Councils be required to identify the least restrictive plans and justify the adoption of a more stringent plan based on conservation?

MANAGEMENT PROCESS

* Is there fair representation for all interested parties on the Councils? Further, should Congress strengthen the requirement that Councils be "fair and balanced" or significantly alter the composition of the Councils to ensure that certain interests such as commercial fishermen, consumers, and conservation groups are better represented?

* Should additional authority be given to the National Marine Fisheries Service at the expense of the Councils by centralizing decision-making, strengthening the NMFS oversight role, or mandating a greater number of FMP's developed by the Department of Commerce?

* Is the Council process for formulating FMP's unnecessarily strict and time-consuming? Can the process be streamlined to allow Councils to act more quickly to alleviate overfishing and thus devote more time to examining the need for conservation of other species?

* Should NMFS be authorized to revise Council plans or amendments?

* Can the current lengthy NMFS approval process for FMP's and amendments be reduced?

* What is the status of cooperation between NMFS and the Councils in research, plan development, and approval, including the imposition of mandatory "guidelines" on the Councils?

* Do improper conflicts exist between Council members' personal financial activities and their service as Council members? If so, how should these conflicts be addressed?

ENFORCEMENT

* Are sufficient NMFS and Coast Guard resources made available to implement and enforce FMP's?

* Should FMP's and amendments be rejected if federal agencies contend they are unenforceable?

* Should NMFS regionalize its enforcement branch, rather than having all enforcement policies and decisions made by NMFS headquarters?

PROPERTY RIGHTS AND FEES

* Should FMP's be adopted that grant harvesting rights to specific individuals while excluding other users?

* Should fees be charged for access to resources? If so, how should fees be fairly applied to commercial and recreational users and consumers? How will the money be spent? What effect will imposition of fees have on international competitiveness of U.S. commercial fisheries products?

BACKGROUND ON SEAFOOD SAFETY

Although there have been relatively few health problems with most seafood sold in the U.S., there are some health risks associated with seafood as there are with all foods. Raw molluscan shellfish appear to create the greatest risk to consumers. Consumption of raw molluscan shellfish may cause severe illness, including death, in "high-risk" consumers such as those who suffer from AIDS, liver disease, or gastrointestinal disorders. For instance, poisoning from ciguatera, a regional toxin that randomly occurs in tropical reef-dwelling fish, presents a serious health risk to consumers of these infected fish. Seafood consumers may also be affected by scombroid poisoning, a toxin caused by improper handling of certain species. Recreational and subsistence harvested fish exposed to naturally occurring toxins and man-made contaminants have also been identified as potential threats to health.

CURRENT AGENCY PROGRAMS

Four federal agencies are currently involved in regulating the wholesomeness of seafood: the National Marine Fisheries Service (NMFS), the Food and Drug Administration (FDA), the Centers for Disease Control (CDC), and the Environmental Protection Agency (EPA). NMFS defines its mission as promoting the wise use of the marine resources including product quality and safety. FDA is the primary agency responsible for regulating the safety of seafood in the U.S. In addition, since nearly 60% of domestically consumed seafood is imported, an important responsibility of FDA is to test imported products. The CDC and EPA regulate contaminant levels and monitor purity of the water from which fish and shellfish are harvested.

National Marine Fisheries Service

NMFS, under the Product Quality and Safety Program, limits fishing areas, develops processing and management methods to improve product wholesomeness, mandates trade product standards, and provides a database for detecting natural biotoxins, microbiological pathogens, and chemical contaminants.

Food and Drug Administration

FDA has significantly expanded its programs to increase the reliability of healthy seafood since 1990. The FDA's Seafood Safety Program budget has increased from \$24.963 million in Fiscal Year 1990 to \$40.5 million in Fiscal Year 1992; funding remained level for Fiscal Year 1993. The Agency formed the Office of Seafood in February, 1991. The Office strives not only to inspect seafood but also to educate consumers by publishing multi-lingual material concerning fish and molluscan-borne illnesses, warning briefs to high-risk consumers, and preparation and cooking guides. FDA also provides a toll-free seafood hotline (1-800-FDA-4010).

In 1987, NMFS and FDA jointly collaborated on the implementation of a voluntary program to monitor health risks associated with seafood processing. The Model Seafood Surveillance Project (MSSP) began as the result of a 1986 legislative mandate to NMFS to design an improved seafood inspection system. The system was to be based on the Hazard Analysis Critical Control Point method (HACCP) which grew out of a 1950's space program inspection plan.

HACCP is comprised of seven steps and designed to target stages in food processing which, when controlled, will reduce the greatest potentials for illness or disease. The stages in the process are: 1) assessment of hazards and identification of preventative measures; 2) identification of Critical Control Points (CCP); 3) establishment of acceptable defect limits

(so-called critical limits); 4) monitoring to control hazards at critical limits; 5) identification of appropriate measures if procedures deviate from the anticipated process; 6) collection of accurate records; and, 7) establishment of a system of checks and balances to verify whether the system is operating correctly. Twelve hundred industry professionals nationwide participated in 49 workshops on this technique. Participants found the program easy to establish because it formalized many practices the industry had already adopted.

Based on the success of this program and an FDA feasibility study on mandating the voluntary processing program, FDA Commissioner David Kessler directed the FDA to institute a mandatory HACCP plan. The announcement came when Commissioner Kessler addressed the Public Voice National Food Policy Conference in Washington, D.C. on March 22, 1993. The proposed regulations for this program should be published in the Federal Register within the next few months. Kessler has indicated the seafood HACCP system will serve as the "prototype" for other industries.

Centers for Disease Control

The CDC, with the help of a network of local and state health officials, surveys illness and disease outbreaks. CDC defines "outbreaks" as two or more cases of the same illness; and defines a "case" as at least one sick individual. Since CDC began tracking food-borne illnesses in 1973, the Agency has recognized 4,491 outbreaks of seafood related illnesses, effecting over 200,000 people. According to CDC, seafood accounted for 20% of all food-borne illnesses, with shellfish as the greatest single cause of illness. A CDC study found 55% of shellfish illnesses are apparently caused by the consumption of raw shellfish. Scombroid toxins, ciguatera toxins, and various other toxins found in shellfish constituted 90% of seafood outbreaks and 75% of the cases. It must be noted that CDC recognizes the relative inaccuracy of these statistics due to lack of reporting or misdiagnosis.

CONGRESSIONAL ACTION

In the 101st Congress, nine bills designed to regulate seafood safety were introduced. Four seafood safety bills were introduced in the 102nd Congress. While these bills were considered and debated by a number of Congressional committees, none became law due to a lack of consensus on several key issues.

Generally, these contentious issues for domestic seafood include: 1) agency jurisdiction, 2) program funding (fee-for-service versus federally funded), 3) the level of whistleblower protection, and 4) the definition of "adulteration" (the unwholesome standard) in the legislation. Also unresolved is how imported seafood should be regulated and held to the same standards as domestic products. Approximately 60% of the seafood consumed in the U.S. is imported.

After FDA proposes the anticipated mandatory HACCP rule, some believe that additional legislation will be necessary for FDA to appropriately carry out the program. Further legislation may also be needed to authorize NMFS to close waters to harvesting and to impose regional fishing restrictions.

H.R. 1412, NATIONAL SHELLFISH SAFETY ACT OF 1992

H.R. 5904, which Representative Unsoeld introduced last Congress, has been reintroduced in the current Congress as H.R. 1412. H.R. 1412 deals specifically with the regulation of shellfish safety and would establish a national shellfish safety program. FDA would be granted

authority to seize adulterated shellfish on site, forgoing the current procedure of suing potential violators under the Food, Drug and Cosmetic Act (section 334 of Title 21 of the U.S. Code).

Currently, shellfish are regulated under the National Shellfish Sanitation Program (NSSP) of the Public Health Service Act. When NSSP was established in 1925, the Surgeon General noted shellfish regulation was chiefly the responsibility of the states. The NSSP established the Interstate Shellfish Sanitation Conference (ISSC) to issue safety guidelines for shellfish and issue permits to endorse interstate shellfish shippers who agree to these guidelines. ISSC believes shellfish are adequately regulated under current law alleviating the need for new legislation. H.R. 1412 is the only seafood safety legislation which has been introduced during the current Congress.

ISSUES

- What are the benefits of a mandatory HACCP-based system versus the continuation of a voluntary system?
- Considering that nearly 60% of the seafood consumed in the U.S. is imported, what measures should be taken to ensure appropriate controls are in place for imported products?
- What are the benefits of consolidating control over seafood safety in one federal agency versus retaining the present system of control among various agencies? If the jurisdiction is consolidated, which agency should retain responsibility?
- What risks would continue to exist with a national HACCP-based system in place and functioning correctly?
- What new legislation (if any) is needed to control seafood safety hazards before and after processing? Should a mandatory HACCP-based system be implemented?
- How will the development of quick "stick tests" to detect toxins at the time of fish landing affect the industry?
- Are discretionary state warnings to high-risk groups adequate to ensure the safety of seafood consumers? What are the repercussions of posting warnings nationally when a potential toxin is limited to a particular region or season?
- Are appropriate measures being taken to address bioaccumulation of chemical contaminants in seafood?

STAFF CONTACTS

Jim Mathews or Greg Lambert (majority, X-63514)
 Rod Moore or Julie Roberts (minority, X-63520)

Regional Fishery Management Councils

(Membership - By State)

New England Council

Maine
New Hampshire
Massachusetts
Rhode Island
Connecticut

Mid-Atlantic Council

New York
New Jersey
Delaware
Pennsylvania
Maryland
Virginia

South Atlantic Council

North Carolina
South Carolina
Georgia
Florida

Gulf of Mexico Council

Texas
Louisiana
Mississippi
Alabama
Florida

Caribbean Council

Virgin Islands
Puerto Rico

Pacific Council

California
Oregon
Washington
Idaho

North Pacific Council

Alaska
Washington
Oregon

Western Pacific Council

Hawaii
American Samoa
Guam
Northern Mariana Islands

(From: Our Living Oceans, 1992, Report on the Status of U.S. Living Marine Resources
USDOC/NOAA/NMFS)

FISHERY MANAGEMENT COUNCILS AND FISHERY MANAGEMENT PLANS

NEW ENGLAND FISHERY MANAGEMENT COUNCIL Maine, New Hampshire Massachusetts, Rhode Island, Connecticut	American Lobster Fishery Management Plan Fishery Management Plan for the Northeast Multispecies Fishery	Fishery Management Plan for Atlantic Sea Scallops Atlantic Salmon Fishery Management Plan
MID-ATLANTIC FISHERY MANAGEMENT COUNCIL New York, New Jersey Delaware, Pennsylvania Maryland, Virginia	Fishery Management Plan for Atlantic Mackerel, Squid, and Butterfish Fisheries Fishery Management Plan for Atlantic Surf Clam and Ocean Quahog Fisheries	Fishery Management Plan for Atlantic Bluefish Fishery Management Plan for Summer Flounder
SOUTH ATLANTIC FISHERY MANAGEMENT COUNCIL North Carolina, South Georgia, Florida	Fishery Management Plan for the Snapper-Grouper Fishery of the South Atlantic Region Carolina,	Atlantic Coast Red Drum Fishery Management Plan
GULF OF MEXICO FISHERY MANAGEMENT COUNCIL Texas, Louisiana, Mississippi, Alabama, Florida	Fishery Management Plan for the Spiny Lobster Fishery of the Gulf of Mexico and South Atlantic Fishery Management Plan for the Stone Crab Fishery of the Gulf of Mexico Fishery Management Plan for the Shrimp Fishery of the Gulf of Mexico Fishery Management Plan for Coastal Migratory Pelagic Resources of the Gulf	of Mexico and South Atlantic Fishery Management Plan for Coral and Coral Reefs in the Gulf of Mexico and South Atlantic Fishery Management Plan for the Reef Fish Resources of the Gulf of Mexico Fishery Management Plan for the Red Drum Fishery of the Gulf of Mexico
CARIBBEAN FISHERY MANAGEMENT COUNCIL Virgin Islands, Puerto Rico	Fishery Management Plan for the Spiny Lobster Fishery of Puerto Rico and the U.S. Virgin Islands	Fishery Management Plan for the Shallow Water Reef Fish Fishery of Puerto Rico and the U.S. Virgin Islands
PACIFIC FISHERY MANAGEMENT COUNCIL California, Oregon, Washington, Idaho	Fishery Management Plan for the Groundfish Fishery off Washington, Oregon, and California Northern Anchovy Fishery Management Plan	Fishery Management Plan for Commercial and Recreational Salmon Fisheries off the Coasts of Washington, Oregon, and California
WESTERN PACIFIC FISHERY MANAGEMENT COUNCIL Hawaii, American Samoa, Guam, Northern Mariana Islands	Fishery Management Plan for the Crustacean Fishery of the Western Pacific Region Fishery Management Plan for the Precious Corals Fisheries of the Western Pacific Region	Fishery Management Plan for the Bottomfish and Seamount Groundfish Fisheries of the Western Pacific Region Fishery Management Plan for the Pelagic Fisheries of the Western Pacific Region

**NORTH PACIFIC FISHERY
MANAGEMENT COUNCIL**Alaska, Washington,
OregonFishery Management Plan for Groundfish
of the Gulf of AlaskaFishery Management Plan for the High
Seas Salmon Fishery off the Coast of
Alaska East of 175 Degrees East
LongitudeFishery Management Plan for the
Groundfish Fishery of the Bering Sea
and Aleutian Islands AreaBering Sea/Aleutian Islands King and
Tanner Crab Fishery Management Plan**SECRETARIAL PLANS**Fishery Management Plan for Atlantic
SwordfishFishery Management Plan for Atlantic
Billfishes**LIST OF FMP
AMENDMENTS
IMPLEMENTED
1 OCTOBER 1991
THROUGH
30 SEPTEMBER 1993****FMP for the Pelagic Fisheries of the
Western Pacific Region; Amendment 3.**
Final rule published 10/18/91; 56 FR
52214.

Prohibited longline fishing within 50 nautical miles of certain Northwestern Hawaiian Islands and corridors between them to provide a protected species zone around the centers of activity of the endangered Hawaiian monk seal and established a process for adjusting the size of the protected species zone and/or changing the conservation and management measures to conserve Hawaiian monk seals and other protected species in the area.

**FMP for the Pelagic Fisheries of the
Western Pacific Region; Amendment 4.**
Final rule published 10/16/91; 56 FR
51849.

Extended until April 1994, a moratorium on the issuance of new permits to participate in the Hawaii-based longline fishery to provide a period of stability for the fishery so that the Western Pacific Fishery Management Council and NMFS can complete a comprehensive, long-term management regime

**FMP for the Pelagic Fisheries of the
Western Pacific Region; Amendment 5.**
Final rule published 3/4/92; 57 FR 7661.

Prohibited longline fishing within 75 n.m. of the islands of Oahu, Kauai, Niihau, and Kaula; within 50 n.m. of the islands of Hawaii, Maui, Kahoolawe, Lanai, and Molokai; and around Guam and its offshore banks to prevent gear conflicts between longline vessels and troll/handline vessels engaged in the pelagic fisheries.

**FMP for the Snapper-Grouper Fishery
of the South Atlantic; Amendment 4.**
Final rule published 10/31/91; 56 FR
56016.

Made extensive revisions to the regulations to prevent overfishing of the snapper-grouper resource, rebuild species that are overfished, collect necessary data for management, provide for a flexible management system that minimizes regulatory delays and rapidly adapts to changes in resource abundance, new information, and changes in fishing patterns; reduce user conflicts, minimize habitat damage, and promote public comprehension of, voluntary compliance with, and enforcement of snapper-grouper management measures.

**FMP for the Snapper-Grouper Fishery
of the South Atlantic; Amendment 5.**
Final rule published 3/5/92; 57 FR 7886.

Implemented a limited entry program for the wreckfish sector of the snapper-grouper fishery, consisting of transferable percentage shares of the annual total allowable catch of wreckfish and annual individual transferable quotas (ITQ's), and made other regulatory changes to manage the wreckfish sector of the snapper-grouper fishery so that its long-term economic viability will be preserved.

**FMP for Groundfish of the Gulf of
Alaska; Amendment 22**
and**FMP for Groundfish of the Bering Sea
and Aleutian Islands Area; Amendment
17.**
Final rule published 3/26/92; 57 FR
10430.

... Fishery Management Councils and Fishery Management Plans

... LIST OF FMP
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Established a new management subarea and area closures around walrus haulout sites in the BSAI, removed Statistical Area 68 in the GOA, and authorized the Director, Alaska Region, NMFS, to issue experimental fishing permits in the GOA and/or BSAI.

FMP for Groundfish of the Gulf of Alaska; Amendment 23

and

FMP for Groundfish of the Bering Sea and Aleutian Islands Area; Amendment 18.

Final rule published 6/3/92; 57 FR 23321 (partial approval).

Allocated Pacific cod and pollock between inshore and offshore components of the groundfish fishery in the GOA, and temporarily allocated pollock between inshore and offshore components in the BSAI. Temporarily established a catcher vessel operational area in the BSAI within which the offshore component is prohibited from conducting fishing operations for pollock during the second seasonal allowance (i.e., the "B" season). A Western Alaska Community Development Quota (CDQ) program was approved to help develop commercial fisheries in communities on the Bering Sea coast.

FMP for Groundfish of the Gulf of Alaska; Amendment 24

and

FMP for Groundfish of the Bering Sea and Aleutian Islands Area; Amendment 19.

Final rule expected September 1992, proposed rule published 5/29/92. 57 FR 22695.

Establishes 1992 halibut bycatch limits for trawl and nontrawl gear in the BSAI and authorizes amendments to regulations that would provide for inseason time/area closures to further reduce prohibited species bycatch rates. Authorizes revisions to measures applicable to the management and monitoring of prohibited species bycatch amounts and the vessel incentive program to reduce prohibited species bycatch rates.

FMP for Groundfish of the Gulf of Alaska; Amendment 25

and

FMP for Groundfish of the Bering Sea and Aleutian Islands Area; Amendment 20.

Final rule published 1/23/92; 57 FR 2683.

Authorizes regulations to protect marine mammal populations; prohibited trawling year-round within 10 n.mi. of 37 Steller sea lion rookeries in the GOA and BSAI; expanded the prohibited zone to 20 n.mi. for five rookeries from 1 January through 15 April each year; established new GOA pollock management districts; and imposed a limit on the amount of an excess pollock seasonal harvest that may be taken in a quarter in each district.

FMP for the Crustacean Fisheries of the Western Pacific Region; Amendment 7.

Final rule published 3/26/92; 57 FR 10437.

Established a limited access program for the lobster fishery of the Northwestern Hawaiian Islands, with vessel permit eligibility based on historical participation in the fishery; permits are transferable. Trap limits were established to further control effort. Established an annual closed season and an annual quota based on the condition of stocks and additional reporting requirements to ensure adequate data to monitor and carry out the limited access and conservation measures.

FMP for the Reef Fish Resources of the Gulf of Mexico; Amendment 4.

Final rule published 4/8/92; 57 FR 11914.

Added aimaco jack and banded rudderfish to the management unit; specified that scamp are counted against the shallow-water grouper quota until that quota is reached, after which scamp are counted against the deep-water grouper quota; established a 3-year moratorium on additional commercial permits in the fishery, with allowances for permit transfers and



**... LIST OF FMP
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sales of permitted vessels, while a more comprehensive limited access system is developed; commencing with commercial permits for 1993, allows the earned income requirement to be met in either of the 2 years preceding the permit application; and made other regulatory changes.

FMP for the Summer Flounder Fishery; Amendment 2.

Final rule expected September, 1992; proposed rule published 6/10/92; 57 FR 24577.

Contains measures to reduce the fishing mortality rate enough to rebuild the severely depleted stock of summer flounder. Includes annual quotas for the commercial fishery allocated on a state-by-state basis, minimum mesh size for trawl gear, seasonal restriction for the recreational fishery, bag limits on a tnp basis for the recreational fishery, minimum fish size requirements for the commercial and recreational fisheries, a 5-year moratorium on entry into the commercial fishery, dealer permits, mandatory logbook reporting by permitted dealers (weekly), prohibition on sale of summer flounder caught by the recreational fishery, and authorization to collect application fees for charter, party, and commercial vessel permits and dealer permits. Contains measures designed to protect endangered and threatened sea turtles, especially to reduce the likelihood of incidental catch or injury to sea turtles in the winter trawl fishery for summer flounder.

FMP for the Red Drum Fishery of the Gulf of Mexico; Amendment 3.

Final rule expected September 1992, proposed rule published 6/16/92; 57 FR 26814

Simplifies the regulations by removing administrative procedures not applicable to the conduct of the red drum fishery, to comply with a ruling by the U.S. District Court for the District of Columbia, and to ease an unnecessarily burdensome requirement for stock assessments, panel reports, and findings regarding ABC and TAC.

FMP for the Pacific Coast Groundfish Fishery; Amendment 6.

Final rule expected September 1992; proposed rule published 7/22/92; 57 FR 32499.

Establishes a license limitation limited entry program for the commercial groundfish fishery based on the issuance of gear-specific Federal permits to promote conservation and improve stability and economic viability of the fishery industry, by limiting or reducing harvesting capacity.

FMP for American Lobster; Amendment 4.

Final rule published 1/3/92; 57 FR 214.

Reduced the minimum carapace size for American lobster to 3 1/4 inches (8.26 cm), delayed further increases in the minimum size until 2 years after the implementation of the amendment, and modified the minimum dimensions of the escape vent to be consistent with the minimum carapace size to restore uniformity among the Federal and state size limits.

FMP for the Atlantic Mackerel, Squid, and Butterfish Fisheries of the Northwest Atlantic Ocean; Amendment 4.

Final rule published 1/7/92; 57 FR 2683.

Allows annual catch specifications to be established for up to 3 years, eliminated the existing foreign fishing "windows" and allows the Director, Northeast Region, NMFS, to limit times and areas in which foreign directed fishing may occur, and allows the Assistant Administrator for Fisheries, NOAA, to impose special conditions on joint ventures and directed foreign fishing, including the requirement that owners and operators of foreign vessels purchase domestic-harvested and processed fish in relation to the allocation of the total allowable level of foreign fishing to the Nation of the flag vessel. Revised the definition of overfishing for Atlantic mackerel.



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